

# AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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SATURDAY, JULY 20, 1833.

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## AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, JULY 20, 1833.

**ERRATUM.**—In the communication of R. BULKEY, published in the last number of the Railroad Journal, page 434, in the 11th line from the bottom of the second column, for “between 22 and 32 degrees,” read “between 212 and 32 degrees.”

We are indebted to JOHN B. JERVIS, Esq. late Engineer of the Mohawk and Hudson, and of the Schenectady and Saratoga Railroads, for a description, with drawings, of his Railroad Waggon Wheel, which, we have no doubt, will be found highly valuable to Railroad Companies. The trifling addition of material and weight would seem by no means in comparison with the beneficial results from its use.

**MECHANICS' MAGAZINE.**—The June number of the *Mechanics' Magazine* will be ready for delivery on the 22d. This number has been delayed several days beyond its usual time of appearance, but in every other respect it is superior to the numbers which have preceded it. It contains eighty pages of letter-press, including a preface and copious index of the volume, with engravings, among which is a very good likeness, accompanied by an interesting memoir of the late ELI WHITNEY, Esq. the inventor of the *Cotton Gin*,—the greatest *labor-saving* machine, perhaps, with the exception of the steamengine, that was ever invented by man. The other engravings are mostly illustrations of new and useful inventions. This, the sixth number, completes the first volume of the *Mechanics' Magazine, and Register of Inventions and Improvements*: a work, it is admitted by competent judges, of much merit and

utility, which was undertaken by the editor of this Journal, a few months since, without a single subscriber. Twelve hundred copies were printed of the two first numbers, and so great has been the call for it, that the entire edition, with the exception of about one hundred copies, of those two numbers, is disposed of; so encouraging indeed has been the reception of, and so great the demand for, the work, that the three last have been, and the future numbers will be *stereotyped*, and the first numbers will be reprinted and stereotyped in a short time, so that any demand which may be made for the work can be promptly supplied.

We were not prompted to this enterprise so much by a prospect of immediate success, as by a knowledge of the want of such a publication, as a medium through which the numerous new inventions and improvements of the day might come before the public in such a shape as to be fairly understood, and a reliance upon the good sense and patronage of those for whose use the work is designed. Thus far, at least, we have not been disappointed; and for the future we can only say, that our best efforts shall be made to render the *MECHANICS' MAGAZINE* all that we have promised, and all that may reasonably be expected at a price so low.

The terms are \$3 per annum in advance, for twelve monthly numbers of 64 pages each; and if any of our friends can aid us in its circulation they will do us a favor, equal; even, to that of circulating the Railroad Journal—the omission to do which, no friend of ours, or of Internal Improvements, will be guilty of.

The memoir of Mr. Whitney has been transferred to the columns of this Journal, and it will richly repay those for reading it who require an occasional reference to such a specimen of noble perseverance, to induce them to press forward to the attainment of eminence and high respectability. One of the most excellent traits in the character of Mr. Whitney was his perseverance—a fixed purpose to accomplish whatever he undertook. The ungenerous course pursued towards him by those States which were so immensely benefitted by his invention, did not dishearten, although it well nigh ruined him. He, unlike most other men of great mechanical powers, directed his

efforts to a single object until it was attained. He may well be taken as a model by the thousands of young men who are left to be architects of their own fame.

At a meeting of the Stockholders of the Brooklyn and Jamaica Railroad Company, held in Brooklyn, the following gentlemen were chosen Directors:

Eliphalet Weekes,	Robert Schuyler,
John A. King,	Elihu Townsend,
Nathan Shelton,	Samuel Smith,
James Herriman,	Abner Chichester,
James Foster,	Van Wyck Weekes,
Charles Hoyt,	Joseph W. Allen,
Charles F. Moulton,	

At a subsequent meeting of the Directors, held at Jones's Buildings, New York, *Eliphalet Weekes* was elected President, *Robert Schuyler* Secretary, and *Elihu Townsend* Treasurer.

We learn that the boiler of the steam engine of the Dry Dock Company burst yesterday morning. Two persons were scalded, and the engineer was thrown out of doors, but was only slightly injured. This explosion is said to have been caused by the gradual dropping of water for a length of time from the tank above, on to that part of the boiler which gave way, and which was thereby corroded and weakened.—*Mercantile & Adv.*

**Accident.**—A workman on the Providence Railroad while in the act of charging a rock with a blast on Wednesday was blown—not sky high—but about thirty feet above *terra firma*, from which elevation he descended without serious injury.—[*Bost. Atlas*.]

**STEAM BOILER DEPOSITS.**—*Institution of Civil Engineers*, April 3.—In the case of the saline deposition, which accumulates in boilers during sea-voyages, it was mentioned as the usual practice merely to blow off a portion of water from the boiler, according as it becomes saturated. In short voyages of three or four days, this is found sufficient for the purpose; but for vessels crossing the Atlantic, or on other long voyages, a more efficient plan has been resorted to, by attaching an apparatus to the engine which pumps out brine from the bottom of the boiler, at the same time throwing in a quantity of clear water equal to what is abstracted. The degree of saturation is indicated by means of an attached thermometer: 218 degrees Fahr. being the boiling point of clean sea water in a steam engine boiler, a range is allowed from that to 227 degrees, which marks the limit of saturation admissible for a steam boiler to be worked with safety.—[*Ath.*].

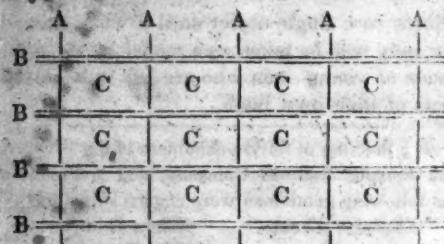
*A New Invention in Road-making, with the Use of Timber.* By JOHN HARTMAN. To the Editor of the American Railroad Journal.

SCOTTSVILLE, Albemarle Co., Va. July 4, 1833.

DEAR SIR.—Not having the pleasure of a personal acquaintance, but being assured by the Editor of the Virginia Farmer, that you will take pleasure in noticing an invention in road-making with the use of timber, which, thus far, is considered as very valuable, I take the liberty of asking your attention to it.

The plan is one which is capable of demonstration, and will be found valuable in timbered countries, particularly where stone is not plenty; and where it is, and timber is equally so, and interest is allowed on the difference of cost, I have no hesitation in saying, that the use of timber will be preferable, either for flat or hilly countries.

I will give you a rough diagram and description, and then say a word more upon the subject.



The lines A represent good locust, cedar, oak, or other timber, of 10 or 12 inches diameter, of lengths to suit the road, laid across it, say 8 or 10 feet apart, rough, for the rails B to lie on, which should be good lasting timber, of from 15 to 20 inches diameter, sawed through the centre, with the edges hewed off, leaving a surface of from 10 to 15 inches, (further experiment must prove which is best, a wide or narrow rail,) bedded, and pinned or bolted down upon the sills A, and, upon the out edge of each, spike on scantling, say three inches square, as guides for the wheels, or upon each edge of the rails or timbers B, forming a groove for the wheels. I however consider the first plan best; then fill up the spaces C level with, or rather above, the rails B, for the horses; the wheels, of course, to run upon the rails B. When two tracks are put down, the space between them must also be filled level, so as to admit waggons, stages, carriages, &c. to pass from one track to the other, when necessary, as no impediment will present itself but the scantling, and that only on one side, which would amount to nothing, nor would the occasional crossing of this scantling injure it, as it would rarely or ever occur twice in the same place.

You see it is quite a simple plan. I will mention some of the advantages it offers for a new road, over M'Adamized, and particularly on hill sides. In the construction of a new road there is no necessity for grubbing, low cutting is quite sufficient. These timbers are put down in the surface of the ground; then, by cutting a ditch on each side of the road, to obtain earth enough to fill up the horse path or way, between the rails, which should be well rammed, or packed down, by a machine just invented for that purpose.

The elevation given, and the fact that it must be kept in shape, or together, by the timbers, which, with the side drains, will guarantee a good road, even in a marsh, for it is

a known fact that it is the wheels of carriages and waggons, and not the horses' feet, which are so destructive to roads, by following always the same track, hence the collecting of water in them, and mud-holes. On hill sides the plan will be admirable, requiring the hills only to be levelled, either by large rough stones, where they are found plenty, as they frequently are on mountains; or timber may be substituted on the lower side, with a little digging on the other. You have the frame level; the earth then taken out on the upper side of the rail, to carry the water off, will fill up the track for the horses, which gives a perfectly smooth road, with less labor and expense generally than would be necessary for a single track of common turnpike, and no fear of its cutting up or wasting away by every rain. The side rails you see will effectually prevent the water from washing the road; and you see the facilities this plan gives for crossing gullies, forming culverts, &c. A double track can be put down, depending upon the convenience and cost of timber, and filled with earth for from 8 to \$1200 a mile, which is but little above the average cost of shaping or throwing up a road of earth alone, 20 feet wide. Bear in mind, too, that 15 feet is wide enough for this plan, whilst, to M'Adamize, it must be, for a double track, from 30 to 40, which forms a heavy item of the expense, and the delay in M'Adamizing should not be forgotten, for the earth must settle before the stone is put on it.

I wish you to give this an insertion in the Railroad Journal, with such remarks as you may think proper. I ask, however, to reply to any objections that may be started. We know, from experience, that the timbers will not wear out, and that they must last as long as in railroads. The design is for common waggons and carriages.

There is no doubt but it will be immediately tried upon a turnpike, connecting the James River at this place with Staunton in the Valley, a distance of 44 miles, instead of M'Adamizing. I have found in the last two weeks, in a journey to Washington City and Baltimore, that, without an exception, and amongst the number several of the most intelligent and practical men found there, including several superintendents of graduation and construction of the Baltimore and Ohio Railroad, and Cumberland roads, being practical engineers, and not an individual but had the very best opinion of it, or feared its not being very valuable for collateral roads. I have no doubt that it will prove a great acquisition to the internal improvement of our country, and give great facility for the speedy transportation of the mails in winter.

I have secured a patent right for the use of it, which I will dispose of to companies or individuals upon good terms.

It is thought generally that timbers will last better to have them burnt or charred, instead of taking the bark off.

Yours, most respectfully,

JOHN HARTMAN.

*The Trial Chronometers at the Royal Observatory.* [From the London Nautical Magazine.]

One of the first objects of peace in all civilized countries is the advancement of the arts and sciences; and of the numerous acquisitions which they have made in England during the last few years, the perfection of the chronometer is not the least important.

The consequence and value of this machine to a country so "essentially maritime" as Great Britain, has justly obtained the attention and patronage of Government; and for the last ten years its improvement has become the object of national reward. In fact, the sum of £500 has been annually expended with this design, in the purchase of the best chronometers that the country can produce. Previous to the year 1823 that sum had been divided into £300 and £200, for the purchase of the two best chronometers; but since that time it has been distributed among the three best, in the proportion of £200, £170, and £130, according to their respective qualities. We shall see that this measure has been attended with salutary effect, for, while it has encouraged the art of constructing the chronometer, it has secured the best of them for the use of the Royal Navy. It has also excited an honorable competition, which has been the means of bringing them to their present perfect condition: one which, until some fresh discovery takes place in their construction, does not seem likely to be surpassed. Another good effect has attended this measure on the part of government. Until the establishment of trial chronometers at the Royal Observatory, the public had no criterion to guide them in deciding on their merits, and consequently their proportional value. Until the absolute daily rates were published in their regular monthly forms, as they are found by comparison at the Observatory, the dark ages of the chronometer may be said to have prevailed: for a veil of darkness hung over the performance of this invaluable machine, and all was uncertainty and conjecture respecting it. The fame of a solitary one now and then broke through this spell, and we heard of its making the land to a mile; but this was considered a *rara avis*, and the owner of it fortunate in his possession. Even Government knew nothing about it, for it was not satisfactorily established what constituted a good chronometer. But, by the rigid trial which they undergo, the good were soon distinguished from the bad, and the state of the art in this country was quickly ascertained.

In 1822 the system of the trial chronometers at the Royal Observatory was established, and in order to ascertain the condition of the art, a reward of £300 and £200 was offered by the legislature for the two best chronometers. Notice was published, that any chronometers might be sent to the Royal Observatory, on trial, for the reward, provided that they were the property of the depositor, and that he was a chronometer maker by profession. As might be expected, chronometers rushed in from every quarter; for, on referring to the printed monthly reports of the Observatory, we find no less than thirty-one were deposited; and it is to be presumed, that those who sent them were their makers, whose names they severally bore.

The result of the first trial was, that, according to the method of deciding on their qualities, the trial number of one, Barraud's, No. 957, was 11.29 seconds, while that of Pennington, 155, was 12.57 seconds: results very different from those of the present day, but sufficient to show the condition of the art.

We will here take the opportunity of showing the method by which the merits of a chronometer are decided by what is termed its trial number: a method which we believe was proposed by the late Dr. Young, being

the result of an extensive mathematical reasoning.

The trial number is derived from the following formula; and the superiority assigned, accordingly, to the smallness of this number.

Put  $R$  = the greatest *mean monthly rate*, per diem.

$r$  = the least do. do.

$R'$  = the greatest daily rate in each month.

$r'$  = the least do. do.

$n$  = No. of months trial.

Make  $(R' - r') = z$

And put  $z, z', z'', z''', \dots$ , for each successive month. The Trial No. then is

$$2(R-r) + \frac{1}{n} \times (z, z', z'', z''', \dots) \text{ &c.}$$

$$= 2(R-r) + \frac{\Sigma (R'-r')}{n} \text{ where } \Sigma \text{ denotes the successive sums of } z, z', z'' \text{ &c.}$$

That is, by taking the difference of the greater and lesser mean monthly rate, and multiplying the same by 2, and adding thereto the mean of the monthly extreme variations.

EXAMPLE.

	Year.	Premium.	Mean Rate.	Extreme Variation.
1830, October	-	-	—0s 19	0s 9
November	-	-	—0.54	2.1
December	-	-	—0.85	2.0
1831, January	-	-	—0.37	1.8
February	-	-	—0.58	1.1
March	-	-	—0.51	1.1
April	-	-	—0.31	1.2
May	-	-	—0.73	2.0
June	-	-	—0.95	1.3
July	-	-	—1.01	1.9
August	-	-	—0.82	1.4
September	-	-	—0.50	1.5
			Mean	1.53
Greater rate in July	-	-	-	1s.01
Lesser do. in April	-	-	-	0.31
			Difference	0.70
Difference $\times 2$	-	-	-	1.40
Mean of Extreme Variation	-	-	-	1.53
Trial Number	-	-	-	2, 93

Thus instituted, the annual trials proceeded regularly at the Observatory; and at the commencement of the 6th trial, in July, 1827, a notice was given, that "No chronometer is to be entitled to the first premium if the trial number shall exceed six seconds, nor to the second if the trial number shall exceed ten seconds. This at once shows that it had been tolerably well ascertained what were the limits to be allowed to a good chronometer. We have seen that 11s.29 and 12s.87 had been the trial numbers of the two first best chronometers, and we now find it determined that six seconds was to be the trial number for the first prize; and that unless the second chronometer came within ten seconds, it was not to be entitled to a premium; both of which limits were within those of the best at the commencement.

In the trial of 1828, the distribution of the whole sum of £500, into three portions, took place in the manner we have before observed, and the trial numbers were respectively established as follows:

For the 1st premium of £200, not exceeding 5 seconds—2s, £170, not exceeding 6 seconds—3s, £130, not exceeding 7½; showing a reduction of one second in the trial number for the first premium—of four seconds in that for the second—and for the third, a number two and a half seconds less than that which had been first established for the second.

In November, 1831, at the commencement of the tenth annual trial, the limits of the trial numbers for obtaining the premiums were again reduced, and established as fol-

lows: For the 1st, not exceeding 3½ seconds—2s, not exceeding 4½ seconds—3s, not exceeding 6 seconds. Thus making the third rate chronometer as good as the second of the former trials; the trial number of the second within half a second of that of the first in the former trials; and the trial number of the first a second and a half less than the first of the preceding trials. This alone furnishes us with a tolerable criterion to judge of the state of the art in 1831, compared with what it was in 1821.

The tenth annual trial has just terminated, and we find a still further reduction in the trial numbers, which now stand as those established for the eleventh trial. They are as follows: For the 1st, not exceeding 2½ seconds—2s, not exceeding 3½ seconds—3s,

not exceeding 4½ seconds; showing another reduction of one second on the two first, and a second and a half on the limits of the third trial number. It might be asked, can these limits be attained by a chronometer? To which we may reply, that they have been; and if the first should not be reached, Government will be no loser, as it will still have the best chronometer, and the maker will obtain a handsome reward.

We shall now lay before our readers the following table, showing the prize chronometers since the first establishment of the trials, the names of their makers, their trial numbers, and the number of chronometers deposited at the Observatory to compete for the prizes at the commencement, and the number left at the end, of each annual trial.

Year.	Makers' Names and Residences.	Number of Chronometers.	Trial Number.	Actual extreme variation in twelve months.	Extremes of Thermometer.	Deposited for Trial.	Left at the end of the Trial.	Number of Chronometers.
1823, First	Mr. Barrand, Cornhill	957	11s29	3.86	25 to 80	31	18	
Second	Mr. Pennington, Camberwell	151	12.87	5.13				
1824, First	Mr. Murray, Cornhill	816	4.44	1.11	34 to 70	36	18	
Second	Mr. Cathro, Kirby street, Hatton Garden	1512	6.84	1.83				
1825, First	Mr. Widenham, East street, Red Lion square	929	5.44	1.80	36 to 70	31	9	
Second	Mr. French, Royal Exchange	1640	6.12	1.85				
1826, First	Mr. French, Royal Exchange	20-3912	2.62	0.61	25 to 82	48	13	
Second		975	3.46	0.99				
1827, First	Messrs. McCabe & Strachan, Cornhill	167	4.68	1.50	29 to 79	59	16	
Second	Mr. Young, Islington	73	5.65	2.00				
1828, First	Mr. Guy, Radnor street, City road	1410	4.41	1.41	35 to 73	53	25	
Second	Mr. Young, Islington	85	4.52	1.23				
1829, First	Mr. Dent, 43 King street, Long Acre	114	2.27	0.54	29 to 73	79	26	
Second	Mr. Carter, Finsbury street	131	3.30	0.79				
Third	Mr. Molynex, 44 Devonshire st., Queen Sq.	943	4.00	1.28				
1830, First	Mr. Baker, 6 Angel Terrace, Pentonville	865	3.59	0.98				
Second	Mr. Carter, Finsbury street	137	4.04	1.09	23 to 80	57	23	
Third	Mr. Murray, Cornhill	640	4.34	1.13				
1831, First	Mr. Cotterill, 163 Oxford street	311	2.93	0.70				
Second	Mr. Frodsham, Change Alley	2	3.65	0.86	27 to 78	73	29	
Third	Mr. Webster, 43 Cornhill	665	3.73	0.89				
1832, First	Mr. Molynex	1033	2.82	0.67				
Second	Mr. Young	110	2.97	0.82	39 to 78	62	23	
Third	Mr. Webster	695	3.09	0.86				

will simplify and improve the performance of the machine.

[From the *Elizabethtown Journal*.]  
EXTENSION OF THE ELIZABETHTOWN AND SOMERVILLE RAILROAD.

Luzerne Co. 10th May, 1833.

"I proceed to answer your inquiries, and give such information as I possess upon the several subjects to which you have directed my attention—as to bituminous coal. Formations of this coal are known to exist in Bradford county and Tioga county, but neither the extent nor the depth of the strata is yet ascertained. Wood abounding, the inhabitants of Bradford county have not sought this coal for fuel, and there being little demand for it, either domestic or foreign, interest, the prime mover of most things, was wanting to induce the investigation. No bed has, I believe, been regularly opened in Bradford county. In the north-east angle of Tioga county, some bituminous coal has been raised, under the influence of the wants of a part of western New-York, and towards which part of the public works of that State are now progressing. The nearest bituminous coal to Pittston is distant about 70 miles, almost directly upon the waters of the Susquehanna, on the waters of the Tawanda creek, and at the northern base of Burnet's mountain.

"As to the communications extending still farther to the north and west, calculated to increase the amount of transportation or travel, upon the Susquehanna and Delaware Railroad, there are several authorized public works, extending from the line of the Susquehanna and Delaware Railroad at Pittston, and above it, necessarily tending to produce that effect; one is the Legget's Gap Railroad, a law for which passed at the session of our legislature previous to the last; the line of this road unites with

Many ingenious and highly interesting experiments have been made on these parts of the chronometer, with the view of leading to some discovery respecting them—an account of which we hope to give our readers in some future numbers of our work. Mr. Arnold's escapement has rendered that part of the construction as complete as can be desired at present, although it is said not to be adopted by our neighbors, the French; and his new lever compensation is a material improvement on those of the circular construction, although the latter display a depth of ingenuity, and acquaintance with the principles of the art, which can only result from many years' application to it.

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the Susquehanna and Delaware Railroad in the valley of the Lackawana, near Centreville, about 12 miles north-east of Pittston. From thence the proposed route of this road runs to the great bend of the Susquehanna, above Binghamton, about 50 miles. This would bring the Susquehanna at the great bend within 108 miles of the Delaware, at the water gap. I forward you a report made on this line in 1832, by Mr. Seymour, a competent engineer. From the point whence this strikes the Susquehanna at the great bend, a line of railroad may be run, at an easy grade of about three feet descent in a mile, to Binghamton. Here we meet with the Chenango canal, now authorized to be constructed at the expense of the State of New-York, a work of great magnitude and extent, penetrating into the heart of the empire State, and forming a connection with the Erie Canal. Our interest continues much higher up the north-east branch, which will be evident on an examination of a map of New-York; but I confine myself in this to the authorized or completed public works with which we are at once connected.

Another extension of the Susquehanna and Delaware Railroad, bearing farther to the north-west, is the Susquehanna river Railroad. An act passed the legislature of Pennsylvania, at its last session, authorizing the governor to incorporate a company to construct a road along the margin of the Susquehanna, on the west side, from a short distance below Wilkesbarre, to the line of our State, near Tioga Point: thus virtually abandoning the North Branch Canal by the State, and establishing the head-quarters of the Pennsylvanian works at the dam, on the Lackawana, a little above Pittston. For some of the many reasons for which the Susquehanna and Delaware Railroad ought to be made, this river railroad will be made; at least such is my decided belief. There are overruling interests, which, when understood, will secure the stock's being subscribed. This river line may be graded from Pittston to the State line, above Tioga, (about 86 miles,) at about two and a half feet elevation per mile. From this to Owego, (say 20 miles farther,) nearly equal facilities exist. Here would be a connection with the Owego and Ithaca Railroad, now nearly completed; and the communication would be extended from thence by the Cayuga lake, to an intersection with the Erie Canal, forming a splendid line of works, penetrating the very centre and the most beautiful part of the State of New-York—a connection of itself of sufficient importance to command the admiration of every friend to the improvement of our common country. Proceeding still farther up the north-east branch of the Susquehanna, a railroad may be graded with nearly equal facility to Binghamton, at the entrance of the Chenango canal—forming an available connection with that improvement, in case the shorter route by the Legget's Gap Railroad should be delayed or fail in its execution.

Returning to Tioga Point, we find the same facilities for a more western extension. Ascending the Chemung or Tioga river, (the north-western branch of the Susquehanna,) with a little higher grade, but on the finest ground for a railroad, at about 20 miles from the Tioga Point, we reach Newtown. Here we meet with the Newtown or Elmira canal, connected with the Crooked Lake canal, and also with the Seneca lake, and come in connection for the third time with the Erie canal.

From Newtown, a canal is about being extended still further up the Tioga river, intended, as I understand, to facilitate the transportation of bituminous coal, from the deposits south of the Pennsylvanian line to the western part of the State of New-York.

From Pittston to Tioga Point, from Tioga Point to Owego and Binghamton, and from Tioga Point to Newtown, the grade is so easy, that on a well-constructed railroad, with locomotive power, a few hours travel would connect these points. Tioga Point I have always

looked upon as the key of nearly all western New-York. And I have ever believed the natural, as well as artificial, communications connected with this point, destined in the progress of events to bring into and lead through Pennsylvania a great part of the rich products of their most fertile region.

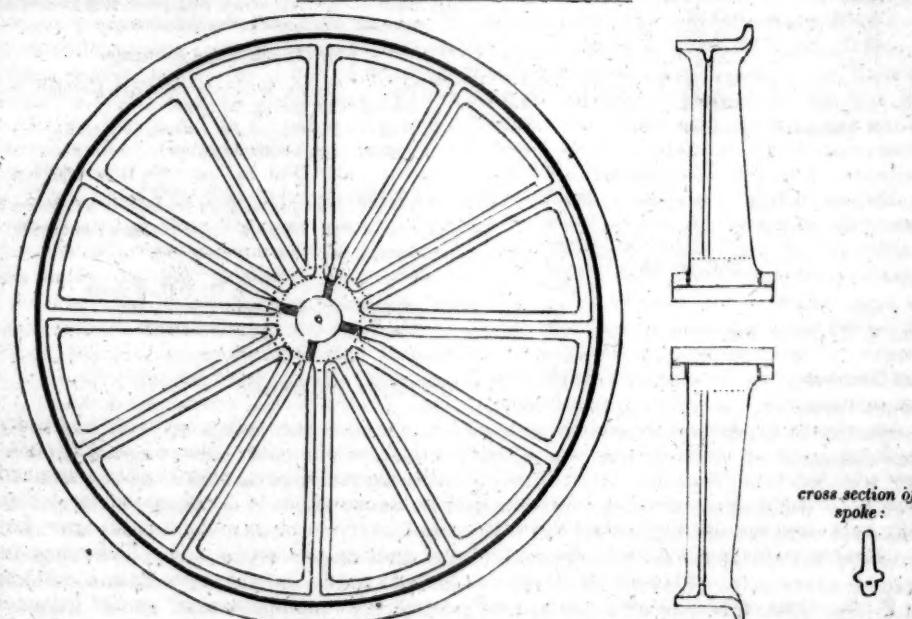
An early connection of the Susquehanna and Delaware Railroad with Tioga Point, by means of the Legget's Gap or river railroad, would enable it to take charge of a great portion of the Susquehanna trade, to the Delaware at least, and a great portion of it would pass on through New-Jersey to the city of New-York. This trade will probably treble in amount on the completion of these communications. In passing the eye over the map of western New-York, from Tioga Point, no intelligent observer can, I think, fail to be convinced, that to that point all the products of a wide range of fertile and populous territory must surely come, and that if all or any of these are ever to find their way to their own great commercial capital, they must do so by the Pittston, Water Gap, Belvidere, and Elizabethtown Railroads.

Little has yet been said of the public travel, and of the revenue to be derived from passengers. This item, under present prospects, ought surely to be taken into view. Will not

this line of communication, by the Elizabethtown and Somerville, and Susquehanna and Delaware Railroads, if extended, as it is now pretty evident it will be extended, by a continued line of railroad into western New-York, surpass all other routes for the accommodation of travel, and become the most desirable line for passengers, from the city of New-York and the New-England sea-board, to the Falls of Niagara, to Lake Erie, and to the whole western region?

On this subject we may, I think, with confidence appeal to facts, unchangeable in their nature, and ask those who would consider this line of railroad, with a view to test its merits, to examine the maps, and particularly a map of western New-York, as a map more particularly showing the whole line, the large map of New-Jersey, &c. &c. This, with the facts made known by the Pennsylvania engineers, relative to the north branch of the Susquehanna river, the plan and facilities of the authorized improvements, the report of Captain Beach on the Susquehanna and Delaware Railroad, the accompanying statements of the Commissioners, and the report of the engineers upon the line from Belvidere, via Clinton, Somerville, and Elizabethtown, to New-York, will afford a view of the outline of this interesting project, from which I think its merits cannot fail to be duly appreciated.

H. W. D.



*Improved Wheel for Railroad Waggon.* By J. B. JERVIS. To the Editor of the American Railroad Journal.

UTICA, July 2, 1833.

SIR,—The annexed drawing is a copy of the plan of a railroad waggon wheel, which I made last year for the Saratoga and Schenectady Railroad Company. The several views given in the drawing will sufficiently explain the plan.

The great importance of obtaining the most perfect plan of a cast iron wheel for railroad waggon will, I presume, render any apology for introducing this subject to your notice unnecessary.

Lightness, a good chill for hardening the face of the rim and flange with adequate strength, all judiciously combined, constitute the important requisites of a good wheel. The broad form required for the track of the rim renders it impracticable to give the metal the best form for strength to resist pressure in the direction to which it is exposed; and the lateral strain to which the wheel is exposed, requires the spokes to be made very broad in proportion to the quantity of metal they contain, which is unfavorable for

strength to resist the vertical strain. The plan generally adopted has been to rely on giving thickness to these parts.

The economy of cast iron wheels, over all that have been sufficiently tested, renders it important to obtain the greatest practicable perfection in their construction. In the plan I first made for the Mohawk and Hudson Railroad Company, the rim and spokes were made on the plan annexed, with the exception of the feather, and a trifling variation in the flange. The wheels carried each from three-fourths to seven-eighths of a ton, and were run at a speed of from ten to twenty miles per hour. At high speed they occasionally failed, but proved to be a safe wheel at ten miles per hour. They were run at an average speed of fourteen miles per hour, which in the course of one year broke about 25 per cent. of the stock. I mention this to show the comparative superiority of the new plan in point of strength, while the only essential variation is in the feather on the spokes, and on the underside of the rim. This addition, so important to the strength, has increased the weight of the wheel from 255 lbs. to 275 lbs., making only 20 lbs. dif-

ference. This plan has been adopted for all the wheels on the Saratoga Railroad, and all the wheels subsequently obtained for the Mohawk and Hudson Railroad have been on the same plan. A few have recently been procured on the Mohawk and Hudson, which are a modification of this plan, and which experience may prove advantageous. They have been nearly a year in use on both roads, and not a single wheel in the passenger carriages have failed. An imperfect wheel in a tender waggon broke, which is the only instance of failure on this plan. The test they have undergone has proved, I think, satisfactorily, that they are a safe wheel for the load before mentioned, moving at a speed of fifteen miles per hour. They have often been run under that load at a speed of twenty miles, and in some instances at twenty-five miles per hour. Experience has shown that when a speed of fifteen miles per hour is taken as the general rate of travelling, it will frequently happen that a velocity of twenty miles will be made. In providing strength it is therefore necessary to keep this in view.

The diameter of the wheel is three feet. I made a plan of a wheel two and a half feet in diameter, in which the feather was adopted for the Rochester Railroad Company. They have had the wheels in use nearly one year, and, though the plan was quite light, no instance of failure has occurred.

Should further experience confirm what has thus far proved highly favorable, it will hardly be necessary to resort to the more expensive plans of wood and wrought iron for wheels, when an average speed of fifteen miles per hour will be adequate to the demands of the business to be done; and which may be taken in general as a fair business calculation.

On a railroad judiciously located and constructed, a locomotive steam engine may move at this speed with ease, safety, and economy. With proper attention it will be easily kept in order for regular work.

Respectfully, your obedient servant,  
JOHN B. JERVIS.

P. S.—The new Locomotive for the Saratoga and Schenectady road is at work, and in a few days you may expect from me some account, according to promise. In the mean time, I hope you will not publish any of the irresponsible notices that may be made of it.

*On the Protection of Timber when used in Railways.* By J. L. SULLIVAN. To the Editor of the American Railroad Journal.

SIR,—The objections of "Mercator" to a method I suggested of protecting timber when used in railways are obviated by merely giving the true explanation of the accidents he adduces in doubt of its efficacy. If he should suggest a better method, and will advocate it under his proper signature, it will certainly be very acceptable.

The explanation of the decay of the sleepers of the "Arcade," in seven years instead of forty, is that they were not only in an *un-ventilated* place, but in contact with green mortar of *common lime*. Now, as my suggestion was not the use of common lime alone, no more need to be said: but this would not be sufficiently satisfactory to one so undiscriminating. The use of lime in making mortar always supposes the progressive process of re-crystallization, which takes a long time—in ancient Rome, mortar was not used until two years old,—and during this

process it *attracts moisture from the atmosphere*: and, of course, would impart moisture to any dryer substance in contact with it, so that it must be bad building to surround the end of a sleeper with it.

Common lime was proposed in my specification to be used only in combination with a resinous substance, pitch, or tar, for the purpose of forming a hard adhesive defence. Nor was it theory alone, but practice in other arts, that suggested it in this. It is not indeed usual, but I have known this mixture used between the sheathing and bottom of vessels, where it makes at first a very soft, but afterwards a very hard coat, when the lime, taking up the water in the tar, becomes re-crystallized. Hence I supposed it would have the same properties in any other situation. It is thus from analogy and principle that improvements are always suggested *before trial*; indeed, there is no time for *trial* of things that *time alone* can try. The *test* has been in the experience of analogous circumstances.

The method also proposed the use of hydraulic lime and fragments of stone to form a defence of the post at and near the surface of the ground, or a little below and above it. Now it is well known that *this lime recrystallizes quickly—that is, it sets in about a fortnight*. But if it were, as "Mercator" suggests, rolled up in a ball and placed in a plate of water, it is probable it would, while green, absorb among its particles some water. In building walls of locks, the water is not let in till the mortar has had time to set. Why, then, should it not set among fragments around a post?

He says that Roman cement and pitch will absorb water by "capillary attraction." This is rather absurd, and actually contrary to experience. We line cisterns with Roman cement; and pitch would be of no use on the bottom of vessels, if it *transmitted* water. These effects cannot take place in this way, because neither of them are of fibrous texture.

How then shall we account for the short duration of pitch on the bottoms of vessels? It will not adhere to them at all, unless the surface be dry. It may not be perfectly so, unless the vessel is a new one; and in time the planks become water-soaked or damp from the inside, and the pitch may thus be gradually dislodged by the interposition of wetness; or, it may be supposed to be *worn off by the friction* of the water the vessel glides through, while the pitch on her upper works remains firm.

Let us then suppose a railway resting on posts deep enough set not to be hove by frost, and the top first covered with a water-proof cement and capped with the rail-bearer, and defended at the surface of the ground in the above mentioned manner, or, perhaps still better, by the use of the *mineral fusible cement*,—can it be doubted that the posts would not last longer than if this precaution were not taken?

Do we not thus prevent one of the causes that must combine to hasten decay in that part?

It is true, the post will, in the ground, be in a damp situation, but its *lower part is cooler* than at the surface; and any natural wetness in the timber either evaporates above, or settles down to the bottom of it. If, by a good choice of wood, and a little care, we make the posts last three or four times as long as otherwise, it is no small advantage,

Cedar or locust are expensive and not always at command; and even these will, with precaution, retain size and strength.

The use of posts as a support was also intended to allow the bearing *timbers to be raised* so much from the ground that the air would circulate freely under them, and the water run off. For the common practice of laying these timbers on embedded cross-sleepers *brings them in contact* with the ground, and hastens decay, besides other disadvantages of this mode of foundation, liable to arise from unequal resistance in a bed of earth soft in the spring of the year.

Perhaps it was for these and like considerations, that Maj. Douglass recommended, in his report and estimate for the Jamaica Railway, the use of *posts*. He did not, indeed, suggest precautions at the surface, because, perhaps, as locust abounds or cedar can be had cheap, it was not thought necessary. It is likely that when this kind of timber is used, and a pile-driver employed to set them in two-rows, this will be deemed better practice than cross-sleepers.

Your correspondent asks for practical results: he may have yet to learn that improvements, of much more pretensions than this, often wait a long time for the public attention and favor, till those who are most interested feel the want and seek the remedy.

If it be true that, in this country, where timber is cheap and iron dear, (the very reverse of the case in England,) we must in some situations have timber railways, then, to make them durable and to *avoid the causes of premature decay*, especially, will be for the interest of stockholders and the public.

J. L. SULLIVAN.

*VOCAL CLOCK.*—"On Monday, April 27, 1762," says Wesley in his Journal, "being at Lurgan, in Ireland, I embraced the opportunity which I had long desired, of talking with Mr. Miller, the contriver of that statue, which was in Lurgan when I was there before. It was the figure of an old man standing in a case, with a curtain drawn before him, over against a clock, which stood on the opposite side of the room. Every time the clock struck he opened the door with one hand, drew back the curtain with the other, turned his head, as if looking round on the company, and then said with a clear, loud, articulate voice, 'past one,' or 'two,' or 'three,' and so on. But so many came to see this (the like of which all allowed was not to be seen in Europe), that Mr. Miller was in danger of being ruined, not having time to attend to his own business. So as none offered to purchase it, or reward him for his pains, he took the whole machine to pieces."

*USEFUL DISCOVERY.*—A machine has been invented and put in operation, in Philadelphia, for napping hats by steam. The editor of the Philadelphia Inquirer recently witnessed the performance of this machine in a hat manufactory, and speaks in high terms of its capabilities. The beauty and superiority of the work are at once admitted by all who have examined it. It is not stated whether or not the process is more rapid than by the old method; but it is held to turn out a much better article, as the napping process requires very hot water, and steam applied to the same purpose may be many degrees hotter than boiling water. The invention is thought to be a very useful one.

*Memoir of the Life of Eli Whitney.* [From the American Journal of Science and Arts.]

Eli Whitney was born in Westborough, Worcester county, Massachusetts, December 8, 1765. The paternal ancestors of Mr. Whitney emigrated from England among the early settlers of Massachusetts, and their descendants were among the most respectable farmers of Worcester county. His maternal ancestors, of the name of Fay, were also English emigrants, and ranked among the substantial yeomanry of Massachusetts. A family tradition respecting the occasion of their coming to this country may serve to illustrate the history of the times. The story is, that about two hundred years ago, the father of the family, who resided in England, a man of large property and great respectability, called together his five sons, and addressed them thus: "America is to be a great country: I am too old to emigrate to it myself, but, if any of you will go, I will give him a double share of my property." The youngest son instantly declared his willingness to go, and his brothers gave their consent. He soon set off for the New World, and landed at Boston, in the neighborhood of which place he purchased a large tract of land, where he enjoyed the satisfaction of receiving two visits from his venerable father.

Indications of Eli's mechanical genius were developed at a very early age. Of his early passion for such employments his sister gives the following account: "Our father had a work-shop, and sometimes made wheels of different kinds, and chairs. He had a variety of tools, and a lathe for turning chair-posts. This gave my brother an opportunity of learning the use of tools when very young. He lost no time, but as soon as he could handle tools he was always making something in the shop, and seemed not to like working on the farm. On a time, after the death of our mother, when our father had been absent from home two or three days, on his return he inquired of the house-keeper what the boys had been doing? She told him what B. and J. had been about. But what has Eli been doing? said he. She replied, he had been making a fiddle. 'Ah!' (added he despondingly,) 'I fear Eli will have to take his portion in fiddles.' He was at this time about twelve years old. His sister adds, that his fiddle was finished throughout, like a common violin, and made tolerably good music. It was examined by many persons, and all pronounced it to be a remarkable piece of work for such a boy to perform. From this time he was employed to repair violins, and had many nice jobs, which were always executed to the entire satisfaction, and often to the astonishment, of his customers. His father's watch being the greatest piece of mechanism that had yet presented itself to his observation, he was extremely desirous of examining its interior construction, but was not permitted to do so. On Sunday morning, observing that his father was going to meeting, and would leave at home the wonderful little machine, he immediately feigned illness as an apology for not going to church. As soon as the family were out of sight, he flew to the room where the watch hung, and, taking it down, he was so delighted with its motions, that he took it all in pieces before he thought of the consequences of his rash deed; for his father was a stern parent, and punishment would

have been the reward of his idle curiosity had the mischief been detected. He, however, put the work all so neatly together, that his father never discovered his audacity until he himself told him many years afterwards."

When Whitney was fifteen or sixteen years of age, he suggested to his father an enterprize which was an earnest of the similar undertakings in which he engaged on a far greater scale in later life. This being the time of the Revolutionary War, nails were in great demand, and bore a high price. At that period nails were made chiefly by hand, with little aid from machinery. Young Whitney proposed to his father to procure for him a few tools, and to permit him to set up the manufacture. His father consented, and he went steadily to work, and suffered nothing to divert him from his task until his day's work was completed. By extraordinary diligence he gained time to make tools for his own use, and to put in knife blades, and to perform many other curious little jobs, which exceeded the skill of the country artisans. At this laborious occupation the enterprising boy wrought alone, with great success, and with much profit to his father, for two winters—pursuing the ordinary labors of the farm during the summers. At this time he devised a plan for enlarging his business and increasing his profits. He whispered his scheme to his sister, with strong injunctions of secrecy; and requesting leave of his father to go to a neighboring town, without specifying his object, he set out on horseback in quest of a fellow laborer. Not finding one so easily as he had anticipated, he proceeded from town to town, with a perseverance which was always a strong trait of his character, until, at the distance of forty miles from home, he found such a workman as he desired. He also made his journey subservient to his improvement in mechanical skill, for he called at every workshop on his way, and gleaned all the information he could respecting the mechanic art.

At the close of the war the business of making nails was no longer profitable; but a fashion prevailing among the ladies of fastening on their bonnets with long pins, he contrived to make those with such skill and dexterity that he nearly monopolized the business, although he devoted to it only such seasons of leisure as he could redeem from the occupations of the farm, to which he now principally betook himself. He added to this article the manufacture of walking canes, which he made with peculiar neatness.

In respect to his proficiency in learning, while young, we are informed that he early manifested a fondness for figures, and an uncommon aptitude for arithmetical calculations, though, in the other rudiments of education, he was not particularly distinguished. Yet, at the age of fourteen, he had acquired so much general information as to be regarded, on this account, as well as on account of his mechanical skill, as a very remarkable boy.

From the age of nineteen, young Whitney conceived the idea of obtaining a liberal education; but being warmly opposed by his step-mother, he was unable to procure the decided consent of his father until he had reached the age of twenty-three years. But partly by the avails of his manual labor, and partly by teaching a village school, he had

been so far able to surmount the obstacles thrown in his way, that he had prepared himself for the Freshman class in Yale College, which he entered in May, 1789. As we are soon to accompany Mr. Whitney beyond the sphere of his domestic relations, we may mention here that he finished his collegiate education with little expense to his father. His last college bills were indeed paid by him, but the money was considered as a loan, and for it the son gave his note, which he afterwards duly cancelled. After the decease of his father he took an active part in the settlement of his estate, but generously relinquished all his parsimony, for the benefit of the other members of the family.

The propensity of Mr. Whitney to mechanical inventions and occupations was frequently apparent during his residence at college. On a particular occasion, one of the tutors happening to mention some interesting philosophical experiment, regretted that he could not exhibit it to his pupils, because the apparatus was out of order, and must be sent abroad to be repaired. Mr. Whitney proposed to undertake this task, and performed it greatly to the satisfaction of the Faculty of the College.

A carpenter being at work upon one of the buildings of the gentleman with whom Mr. Whitney boarded, the latter begged permission to use his tools during the intervals of study; but the mechanic being a man of careful habits, was unwilling to trust them with a student, and it was only after the gentleman of the house had become responsible for all damages, that he would grant the permission. But Mr. Whitney had no sooner commenced his operations than the carpenter was surprised at his dexterity, and exclaimed, "there was one good mechanic spoiled when you went to college."

Soon after Mr. Whitney took his degree, in the autumn of 1792, he entered into an engagement with a Mr. B. of Georgia, to reside in his family as a private teacher. Mr. Whitney had scarcely set his foot in Georgia, however, before he was met by a disappointment which was an earnest of that long series of adverse events which, with scarcely an exception, attended all his future negotiations in the same State. On his arrival he was informed that Mr. B. had employed another teacher, leaving Whitney entirely without resources, and without friends, except in the family of General Greene, of Mulberry Grove, near Savannah, with whom he had accidentally formed an acquaintance in his journey into Georgia. In these benevolent people, however, his case excited much interest, and Mrs. Greene kindly said to him, 'My young friend, you propose studying the law; make my house your home—your room, your castle—and there pursue what studies you please.' He accordingly commenced the study of law under that hospitable roof.

Mrs. Greene was engaged in a piece of embroidery, in which she employed a peculiar kind of frame called a *tambour*. She complained that it was badly constructed, and that it tore the delicate threads of her work. Mr. Whitney, eager for an opportunity to oblige his hostess, set himself at work, and speedily produced a *tambour* frame made on a plan entirely new, which he presented to her. Mrs. Greene and her family were greatly delighted with it, and thought it a wonderful proof of ingenuity.

Not long afterwards, a large party of gen-

lemen came from Augusta and the upper county, to visit the family of Gen. Greene, consisting principally of officers who had served under the General in the Revolutionary army. Among the number were Major Brenea, Major Forsyth, and Major Pendleton. They fell into conversation upon the state of agriculture among them, and expressed great regret that there was no means of cleaning the green seed cotton, or separating it from its seed, since all the lands which were unsuitable for the cultivation of rice would yield large crops of cotton. But until ingenuity could devise some machine which would greatly facilitate the process of cleaning, it was in vain to think of raising cotton for market. Separating one pound of the clean staple from the seed was a day's work for a woman; but the time usually devoted to picking cotton was the evening, after the labor of the field was over. Then the slaves, men, women, and children, were collected in circles, with one, whose duty it was to rouse the dozing and quicken the indolent. While the company were engaged in this conversation, "Gentlemen," said Mrs. Greene, "apply to my young friend, Mr. Whitney—he can make any thing." Upon which she conducted them into a neighboring room, and showed them her tambour frame, and a number of toys which Mr. Whitney had made, or repaired, for the children. She then introduced the gentlemen to Whitney himself, extolling his genius, and commanding him to their friendship. He modestly disclaimed all pretensions to mechanical genius; and when they named their object, he replied that he had never seen cotton or cotton seed in his life. Mrs. G. said to one of the gentlemen, "I have accomplished my aim. Mr. Whitney is a very deserving young man, and to bring him into notice was my object. The interest which our friends now feel for him, will, I hope, lead to his getting some employment to enable him to prosecute the study of the law."

But a new turn, that no one of the company dreamed of, had been given to Mr. Whitney's views. It being out of season for cotton in the seed, he went to Savannah, and searched among the warehouses and boats until he found a small parcel of it. This he carried home, and communicated his intentions to Mr. Miller, who warmly encouraged him, and assigned him a room in the basement of the house, where he set himself at work with such rude materials and instruments as a Georgia plantation afforded. With these resources, however, he made tools better suited to his purpose, and drew his own wire, (of which the teeth of the earliest gins were made,) an article which was not at that time to be found in the market of Savannah. Mrs. Greene and Mr. Miller were the only persons ever admitted to his work-shop, and the only persons who knew in what way he was employing himself. The many hours he spent in his mysterious pursuits, afforded matter of great curiosity, and often of raillery, to the younger members of the family. Near the close of the winter the machine was so nearly completed as to leave no doubt of its success.

Mrs. Greene was eager to communicate to her numerous friends the knowledge of this important invention, peculiarly important at that time, because then the market was glutted with all those articles which were suited to the climate and soil of Georgia, and nothing could be found to give occupation to the

negroes, and support to the white inhabitants. This opened suddenly to the planters boundless resources of wealth, and rendered the occupations of the slaves less unhealthy and laborious than they had been before.

Mrs. Greene, therefore, invited to her house gentlemen from different parts of the State, and, on the first day after they had assembled, she conducted them to a temporary building, which had been erected for the machine, and they saw, with astonishment and delight, that more cotton could be separated from the seed in one day, by the labor of a single hand, than could be done in the usual manner in the space of many months.

The individual, however, who contributed most to incite Whitney to persevere in the undertaking was *Phineas Miller, Esq.* Mr. Miller was a native of Connecticut, and a graduate of Yale College. Like Mr. Whitney, soon after he had completed his education at college, he came to Georgia as a private teacher, in the family of General Greene, and after the decease of the General, he became the husband of Mrs. Greene. He had qualified himself for the profession of law, and was a gentleman of cultivated mind and superior talents; but he was of an ardent temperament, and therefore well fitted to enter with zeal into the views which the genius of his friend had laid open to him. He had also considerable funds at command, and proposed to Mr. Whitney to become his joint adventurer, and to be at the whole expense of maturing the invention until it should be patented. If the machine should succeed in its intended operation, the parties agreed, under legal formalities, "that the profits and advantages arising therefrom, as well as all privileges and emoluments to be derived from patenting, making, vending, and working the same, should be mutually and equally shared between them." This instrument bears date May 27, 1793, and immediately afterwards they commenced business under the firm of *Miller & Whitney*.

An invention so important to the agricultural interest (and, as it has proved, to every department of human industry,) could not long remain a secret. The knowledge of it soon spread through the State, and so great was the excitement on the subject, that multitudes of persons came from all quarters of the State to see the machine; but it was not deemed safe to gratify their curiosity until the patent right had been secured. But so determined were some of the populace to possess this treasure, that neither law nor justice could restrain them; they broke open the building by night and carried off the machine. In this way the public became possessed of the invention; and before Mr. Whitney could complete his model and secure his patent, a number of machines were in successful operation, constructed with some slight deviation from the original, with the hope of evading the penalty for violating the patent-right.

As soon as the copartnership of Miller & Whitney was formed, Mr. Whitney repaired to Connecticut, where, as far as possible, he was to perfect the machine, obtain a patent, and manufacture, and ship for Georgia, such a number of machines as would supply the demand.

His return to Georgia was, however, delayed until April. The importunity of Mr. Miller's letters, written during the preceding period, urging him to come on, evinces how eager the Georgia planters were to enter the

new field of enterprise which the genius of Whitney had laid open to them.

"Do not let a deficiency of money, do not let any thing, (says Mr. Miller,) hinder the speedy construction of the gins. The people of the country are almost running mad for them, and much can be said to justify their importunity."

The general resort of the planters to the cultivation of cotton, and its consequent production in vast quantities, the value of which depended entirely upon the chance of getting it cleaned by the gin, created great uneasiness, which first displayed itself in this pressure upon Miller and Whitney, and afterwards afforded great encouragement to marauders upon the patent right, who were now becoming numerous and audacious.

The *roller gin* was at first the most formidable competitor with Whitney's machine. It extricated the seeds by means of rollers, crushing them between revolving cylinders, instead of disengaging them by means of teeth. The fragments of seeds which remained in the cotton, rendered its execution much inferior in this respect to Whitney's gin, and it was also much slower in its operation.

But a still more formidable rival appeared early in the year 1795, under the name of the *Saw Gin*. It was Whitney's gin, except that the teeth were cut in circular rims of iron, instead of being made of wires, as was the case in the earlier forms of the patent gin. The idea of such teeth had early occurred to Mr. Whitney, as he afterwards established by legal proof. But they would have been of no use except in connection with the other parts of his machine; and, therefore this was a palpable attempt to evade the patent right, and it was principally in reference to this that the law-suits were afterwards held.

In March, 1795, in the midst of these perplexities and discouragements, Mr. Whitney went to New-York on business, and was detained there three weeks by an attack of fever and ague, the seeds of which had been sown the previous season in Georgia. As soon as he was able to leave the house, he embarked on board a packet for New-Haven. On his arrival at this place, he was suffering under one of those chills which precede the fever. As was usual on the arrival of the packet, people came on board to welcome their friends, and to exchange salutations, when Mr. Whitney was informed that, on the preceding day, his shop, with all his machines and papers, had been consumed by fire. Thus suddenly was he reduced to absolute bankruptcy, having debts to the amount of four thousand dollars, without any means of making payment. Mr. Whitney, however, had not a spirit to despond under difficulties and disappointments, but was aroused by them to still more vigorous efforts.

Mr. Miller also, on hearing of this catastrophe, manifested a kindred spirit. The letters written by Mr. Whitney on the occasion we have not been able to obtain; but the reply of Mr. Miller indicates what were the feelings of both parties. It may be of service to enterprising young men, who meet with misfortunes, to read an extract or two:

"I think with you (says Mr. M.), that we ought to meet such events with equanimity. We have been pursuing a valuable object by honorable means; and I trust that all our measures have been such as reason and virtue must justify. It has pleased Providence

to postpone the attainment of this object. In the midst of the reflections which your story has suggested, and with feelings keenly awake to the heavy, the extensive injury we have sustained, I feel a secret joy and satisfaction that you possess a mind in this respect similar to my own—that you are not disheartened—that you do not relinquish the pursuit—and that you will persevere and endeavor, at all events, to attain the main object. This is exactly consonant to my own determinations. I will devote all my time, all my thoughts, all my exertions, and all the money I can earn or borrow, to encompass and complete the business we have undertaken; and if fortune should, by any future disaster, deny us the boon we ask, we will at least deserve it. It shall never be said that we have lost an object which a little perseverance could have attained. I think, indeed, it will be very extraordinary, if two young men in the prime of life, with some share of ingenuity, with a little knowledge of the world, a great deal of industry, and a considerable command of property, should not be able to sustain such a stroke of misfortunes as this, heavy as it is."

While struggling with these multiplied misfortunes, intelligence was received from England, which threatened to give a final blow to all their hopes. It was, that the English manufacturers condemned the cotton cleaned by their machines, on the ground that the staple was greatly injured.

At this time (1796) Miller and Whitney had thirty gins at eight different places in the State of Georgia, some of which were carried by horses or oxen, and some by water. A number of these were standing still for want of the means of supplying them. The company had also invested about \$10,000 in real estate, which was suited only to the purposes of ginning cotton. All things now conspired to threaten them with deep insolvency.

We have before us a letter written by Mr. Whitney, dated Oct. 7th, 1797, from which it will be seen what was the state of his affairs, and of his feelings, at this period: "The extreme embarrassments (says he) which have been for a long time accumulating upon me, are now become so great that it will be impossible for me to struggle against them many days longer. It has required my utmost exertions to exist, without making the least progress in our business. I have labored hard against the strong current of disappointment, which has been threatening to carry us down the cataract, but I have labored with a shattered oar, and struggled in vain, unless some speedy relief is obtained."

However, brighter prospects seemed now to be opening upon them, from the more favorable reports that were made respecting the quality of their cotton. Respectable manufacturers, both at home and abroad, gave favorable certificates; and retailing merchants sought for the cotton cleaned by Whitney's gin, because it was greatly preferred by their customers to any other in the market. This favorable turn in public opinion would have restored prosperity to the company, had not the encroachments on their patent right become so extensive as almost to annihilate its value.

In April, 1799, Mr. Miller writes as follows: "The prospect of making any thing by ginning in this State is at an end. Sur-reptitious gins are erected in every part of the country; and the jurymen at Augusta

have come to an understanding among themselves, that they will never give a cause in our favor, let the merits of the case be as they may."

Many of the planters of South Carolina having expressed an opinion, that, if an application were made to their legislature by the citizens to purchase the right of the patentees for that State, there was no doubt that it would be done to the satisfaction of all parties. Accordingly Mr. Whitney repaired to Columbia, taking the city of Washington in his way, where he was furnished with very obliging letters from President Jefferson and Mr. Madison, then Secretary of State: testimonials which, no doubt, were of great service to him in his subsequent negotiations. Soon after the opening of the session of the legislature in the month of December, 1801, the business was regularly brought before the legislature, and a joint committee of both Houses appointed to treat with the patentees.

We subjoin an extract of a letter addressed at this time by Mr. Whitney to his friend Stebbins, both as a statement of the particulars relating to the contract, and as evincive of the feelings of the writer:

"COLUMBIA, S. C., Dec. 20, 1801.

"DEAR STEBBINS.—I have been at this place a little more than two weeks, attending the legislature. They closed their session at ten o'clock last evening. A few hours previous to their adjournment, they voted to purchase, for the State of South Carolina, my patent right to the machine for cleaning cotton at fifty thousand dollars, of which sum twenty thousand is to be paid in hand, and the remainder in three annual payments of ten thousand dollars each. This is selling the right at a great sacrifice. If a regular course of law had been pursued, from two to three hundred thousand dollars would undoubtedly have been recovered. The use of the machine here is amazingly extensive, and the value of it beyond all calculation. It may, without exaggeration, be said to have raised the value of seven-eighths of all the three southern States from fifty to one hundred per cent. We get but a song for it in comparison with the worth of the thing; but it is securing something. It will enable Miller and Whitney to pay all their debts, and divide something between them. It establishes a precedent, which will be valuable as it respects our collections in other States, and I think there is now a fair prospect that I shall in the event realize property enough to render me comfortable, and in some measure independent."

In December, 1802, Mr. Whitney negotiated a sale of his patent right with the State of North Carolina. The legislature laid a tax of two shillings and sixpence upon every saw\* employed in ginning cotton, to be continued for five years, which sum was to be collected by the sheriffs in the same manner as the public taxes; and after deducting the expenses of collection, the avails were faithfully paid over to the patentee. At that time the culture of cotton had made comparatively little progress in the State of North Carolina, but in proportion to the amount of interest concerned, this compensation was regarded by Mr. Whitney as more liberal than that received from any other source.

While these encouraging prospects were rising in North Carolina, Mr. Goodrich, an agent of the company, was entering into a

similar negociation with the State of Tennessee. The importance of the machine began to be universally acknowledged in that State, and various public meetings of the citizens were held, in which were adopted resolutions strongly in favor of a public contract with Miller and Whitney. Accordingly the legislature of Tennessee, at their session in 1804, passed an act laying a tax of thirty-seven and a half cents per annum on every saw for the period of four years.

But while a fairer day seemed dawning upon the company in this quarter, an unexpected and threatening cloud was rising in another. It was during Mr. Whitney's negociation with the legislature of North Carolina that he received intelligence that the legislature of South Carolina had annulled the contract made with Miller and Whitney the preceding year, had suspended payment of the balance (thirty thousand dollars) due them, and instituted a suit for the recovery of what had already been paid to them.

The ostensible causes of this extraordinary measure, adopted by the legislature of South Carolina, were a distrust of the validity of the patent right, and failure on the part of the patentees to perform certain conditions agreed on in the contract. Great exertions had constantly been made in Georgia to impress the public with the notion that Mr. Whitney was not the original inventor of the cotton gin, somebody in Switzerland having conceived the idea of it before him; and especially that he was not entitled to the credit of the invention in its improved form, in which saws were used instead of wire teeth, inasmuch as his particular form of the machine was introduced by one Hodgin Holmes. It was on these grounds that the Governor of Georgia, in his message to the legislature of that State in 1803, urged the inexpediency of granting any thing to Miller and Whitney.

Popular feeling, stimulated by the most sordid motives, was now awakened throughout all the cotton-growing States. Tennessee followed the example of South Carolina in suspending the payment of the tax laid upon cotton gins, and a similar attempt was made at a subsequent session of the legislature of North Carolina, but it wholly failed, and the report of a committee offering a resolution, that "the contract ought to be fulfilled with punctuality and good faith," was adopted by both branches of the legislature.

There were also high minded men in South Carolina, who were indignant at the dishonorable measures adopted by their legislature of 1803, and their sentiments had impressed the community so favorably with regard to Mr. Whitney, that at the session of 1804 the legislature not only rescinded what the previous legislature had done, but signified their respect for Mr. Whitney by marked commendations.

At this time a new and unexpected responsibility devolved on Mr. Whitney, in consequence of the death of his partner, Mr. Miller, who died on the 7th December, 1803.

Mr. Whitney was now left alone to contend singly against those difficulties which had for a series of years almost broken down the spirits of both the partners. But the favorable issue of the affairs of Mr. Whitney in South Carolina during the subsequent year, and the generous receipts that he obtained from the avails of his contracts with North Carolina, relieved him from the embarrassments under which he had so long groaned, and made him in some degree in-

\* Some of the gins had forty saws.

dependent. Still, no small portion of the funds thus collected in North and South Carolina was expended in carrying on the fruitless, endless law-suits in Georgia.

In the United States Court, held in Georgia in December, 1807, Mr. Whitney obtained a most important judgment, in a suit brought against a trespasser of the name of Fort. It was on this trial that Judge Johnson gave the decision in his favor, to which we have before alluded.

This favorable decision, however, did not put a final step to aggression. At the next session of the United States Court, two other actions were brought, and verdicts for damages gained, of two thousand dollars in one case, and one thousand and five hundred dollars in the other.

The influence of these decisions, however, availed Mr. Whitney very little, for now the term of his patent right was nearly expired. More than sixty suits had been instituted in Georgia before a single decision on the merits of his claims was obtained, and at the period of this decision, thirteen years of his patent had expired.

In 1798, Mr. Whitney became deeply impressed with the uncertainty of all his hopes founded upon the cotton gin, notwithstanding their high promise, and he began to think seriously of devoting himself to some business in which superior ingenuity, seconded by uncommon industry, qualifications which he must have been conscious of possessing in no ordinary degree, would conduct him by a slow but sure route to a competent fortune; and we have always considered it indicative of a solid judgment, and a well balanced mind, that he did not, as is frequently the case with men of inventive genius, become so poisoned with the hope of vast and sudden wealth as to be disqualified for making a reasonable provision for life, by the sober earnings of frugal industry.

The enterprize which he selected in accordance with these views was the manufacture of arms for the United States. He accordingly addressed a letter to the Hon. Oliver Wolcott, Secretary of the Treasury, and through his influence obtained a contract for ten thousand stand of arms, amounting (as the price of each musket was to be thirteen dollars and forty cents) to one hundred and thirty-four thousand dollars—an undertaking of great responsibility, considering the limited pecuniary resources of the undertaker. This contract was concluded on the 14th of January, 1798, and four thousand were to be delivered on or before the last day of September of the ensuing year, and the remaining six thousand within one year from that time, so that the whole contract was to be fulfilled within a little more than the period of two years: and for the due fulfilment of it, Mr. Whitney entered into bonds to the amount of thirty thousand dollars. He must have engaged in this undertaking resolved "to attempt great things," without stopping to weigh all the chances against him, for as yet the works were all to be erected, the machinery to be made, and much of it to be invented; the raw materials were to be collected from different quarters, and the workmen themselves, almost without exception, were yet to learn the trade. Nor was it a business with which Mr. Whitney himself was particularly conversant. Mechanical invention, a sound judgment, and persevering industry, were all that he possessed, at first, for the accomplishment of an

enterprize which was, at that time, probably greater than any man had ever undertaken in the State of Connecticut.

The site which Mr. Whitney had purchased for his works was at the foot of the celebrated precipice called East Rock, within two miles of New-Haven. This spot, (which is now called Whitneyville), is justly admired for the romantic beauty of its scenery. A waterfall of moderate extent afforded here the necessary power for propelling the machinery. In this pleasant retreat Mr. Whitney commenced his operations with the greatest zeal; but he soon became sensible of the multiplied difficulties which he had to contend with. A winter of uncommon severity set in early, and suspended his labors; and when the spring returned, he found himself so little advanced that he foresaw that he should be utterly unable to deliver the four thousand muskets according to contract. At the end of the first year after the contract was made, instead of four thousand muskets, only five hundred were delivered, and it was eight years, instead of two, before the whole ten thousand were completed. The entire business relating to the contract was not closed until January, 1809, when (so liberally had the government made advances to the contractor) the final balance due to Mr. Whitney was only 2,450 dollars.

In the year 1812, he entered into a new contract with the United States to manufacture for them fifteen thousand stand of arms; and in the mean time he executed a similar engagement (we know not how extensive) for the State of New-York.

It should be remarked, that the utility of Mr. Whitney's labors, during the period of his life which we have now been contemplating, was not limited to the particular business in which he was engaged. Many of the inventions which he made to facilitate the manufacture of muskets, were applicable to most other manufactures of iron and steel. To many of these they were soon extended, and became the nucleus around which other inventions clustered; and at the present time some of them may be recognized in almost every considerable workshop of that description in the United States.

In the year 1812, Mr. W. made application to Congress for the renewal of his patent for the cotton gin. In his memorial he presented a history of the struggles he had been forced to encounter in defence of his right, observing that he had been unable to obtain any decision on the merits of his claim until he had been *eleven years* in the law, and *thirteen years* of his patent term had expired. He set forth, that his invention had been a source of opulence to thousands of the citizens of the United States; that, as a labor-saving machine, it would enable one man to perform the work of a thousand men; and that it furnishes to the whole family of mankind, at a very cheap rate, the most essential article of their clothing. Hence, he humbly conceived himself entitled to a further remuneration from his country, and thought he ought to be admitted to a more liberal participation with his fellow citizens in the benefits of his invention. Although so great advantages had been already experienced, and the prospect of future benefits was so promising, still, many of those whose interest had been most promoted, and the value of whose property had been most enhanced, by this invention, had obstinately persisted in refusing to make any compen-

sation to the inventor. The very men whose wealth had been acquired by the use of this machine, and who had grown rich beyond all former example, had combined their exertions to prevent the patentee from deriving any emolument from his invention. From that State, in which he had first made and where he had first introduced his machine, and which had derived the most signal benefits from it, he had received nothing; and from one State had he received the amount of *half a cent per pound* on the cotton cleaned with his machines in one year. Estimating the value of the labor of one man at twenty cents per day, the whole amount which had been received by him, for his invention, was not equal to the value of the labor saved in one hour by his machines then in use in the United States.

Notwithstanding these cogent arguments, the application was rejected by Congress. Some liberal minded and enlightened men from the cotton districts favored the petition; but a majority of the members from that section of the Union were warmly opposed to granting it.

In the midst of these fruitless efforts to secure to himself some portion of the advantages which so many of his fellow citizens were reaping from his ingenuity, his armor proceeded with a sure but steady pace, which bore him on to affluence. For the few following years he occupied himself principally in the concerns of his manufactory, inventing new kinds of machinery, and improving and perfecting the old.

In January, 1817, Mr. Whitney was married to Miss Henrietta F. Edwards, youngest daughter of the honorable Pierpont Edwards, late Judge of the District Court for the State of Connecticut. The fond and quiet scenes of domestic life, after which he had long aspired, but from which he had been debarred by the embarrassed or unsettled state of his affairs, now spread before him in the fairest light. Four children, a son and three daughters, added successively fresh attractions to the family circle. Happy in his home, and easy in his fortune, with a measure of respectability among his fellow citizens, and celebrity abroad, which might well satisfy an honorable ambition, he seemed to have in prospect, after a day of anxiety and toil, an evening unusually bright and serene.

In this uniform and happy tenor, he passed the five following years, when a formidable malady began to make its approaches, by a slow but hopeless progress, which at length terminated his life.

From the 12th November, 1824, his sufferings became almost unremitting, until the 8th January, 1825, when he expired,—retaining his consciousness to the last, closing his own eyes, and making an effort to close his mouth.

In his person, Mr. Whitney was considerably above the ordinary size, of a dignified carriage, and of an open, manly and agreeable countenance. His manners were conciliatory, and his whole appearance such as to inspire universal respect. Among his particular friends no man was more esteemed. Some of the earliest of his intimate associates were also among the latest. With one or two of the bosom friends of his youth he kept up a correspondence by letter for thirty years, with marks of continually increasing regard. His sense of honor was high, and his feelings of resentment and indignation occasionally strong. He could, however, be cool when his opponents were heated; and

though sometimes surprised by passion, yet the unparalleled trials of patience which he had sustained did not render him petulant, nor did his strong sense of the injuries he had suffered in relation to the cotton gin impair the natural serenity of his temper.

But the most remarkable trait in the character of Mr. Whitney, aside from his inventive powers, was his *perseverance*; and this is the more remarkable, because it is so common to find men of great powers of mechanical invention defective in this quality. Nothing is more frequent than to see a man of the most fertile powers of invention run from one piece of mechanism to another, leaving the former half finished; or if he has completed any thing, it is usual to find him abandon it to others, too tickle to pursue the advantages he might reap from it, or too sensitive to struggle with the sordid and avaricious, who may seek to rob him of the profits of his invention.

It would be difficult to estimate the full value of Mr. Whitney's labors without going into a minuteness of detail inconsistent with our limits. Every cotton garment bears the impress of his genius, and the ships that transported it across the waters were the heralds of his fame; and the cities that have risen to opulence by the cotton trade must attribute no small share of their prosperity to the inventor of the cotton gin. We have before us the declaration of the late Mr. Fulton, that Arkwright, Watt, and Whitney, (we could add Fulton to the number), were the three men who did most for mankind of any of their contemporaries; and, in the sense in which he intended it, the remark is probably true.

The following observations of a distinguished scholar and statesman, elicited in consequence of a recent visit to the cemetery of New-Haven, evince the estimation in which Mr. Whitney's name is held, by one who is fully capable of appreciating his merits. After alluding to the monument of Gen. Humphreys, who introduced the fine woolled sheep into the United States, the stranger remarks: "But Whitney's monument perpetuates the name of a still greater public benefactor. His simple name would have been epitaph enough, with the addition, perhaps, of 'the inventor of the cotton gin.' How few of the inscriptions in Westminster Abbey could be compared with that! Who is there that, like him, has given his country a machine—the product of his own skill—which has furnished a large part of its population, 'from childhood to age, with a lucrative employment: by which their debts have been paid off; their capitals increased; their lands trebled in value.' It may be said, indeed, that this belongs to the physical and material nature of man, and ought not to be compared with what has been done by the intellectual benefactors of mankind—the Miltons, the Shakespeares, and the Newtons. But it is quite certain that any thing short of the highest intellectual vigor—the brightest genius—is sufficient to invent one of these extraordinary machines. Place a common mind before an oration of Cicero and a steam engine, and it will despair of rivalling the latter as much as the former; and we can by no means be persuaded, that the peculiar aptitude for combining and applying the simple powers of mechanics so as to produce these marvellous operations, does not imply a vivacity of the imagination, not inferior to that of the poet and the orator. And then, as to the effect on society, the machine,

it is true, operates, in the first instance, on mere physical elements, to produce an accumulation and distribution of property. But do not all the arts of civilization follow in the train? and has not he, who has trebled the value of land, created capital, rescued the population from the necessity of emigrating, and covered a waste with plenty—has not he done a service to the country, of the highest moral and intellectual character? Prosperity is the parent of civilization, and all its refinements; and every family of prosperous citizens added to the community, is an addition of so many thinking, inventing, moral, and immortal natures."

On Mr. Whitney's tomb is the following inscription:

ELI WHITNEY,  
The inventor of the Cotton Gin.  
Of useful science and art, the efficient  
patron and improver.  
In the social relations of life, a model of excellence.  
While private affection weeps at his tomb,  
his country honors his memory.  
Born December 8, 1765.—Died January 8, 1825.

#### NEW-YORK AMERICAN.

JULY 13, 15, 16, 17, 18, 19—1833.

#### LITERARY NOTICES.

OBSERVATIONS ON PROFESSIONS, LITERATURE, MANNERS, AND EMIGRATION, IN THE UNITED STATES AND CANADA, by the REV. ISAAC FIDLER: N. Y. J. & J. HARPER.—The Rev. Isaac came hither from England in 1832, a radical in politics, and a disappointed churchman. He knew a great deal of Hebrew, Sanscrit, and Arabic, and very little of the world; and therefore reasoned very logically and wisely, that if in an old rich country—where time and means are abundant for acquiring every sort of knowledge—his stock of Eastern languages could not find a market, there could be no reason to doubt that in a comparatively new country, and in the midst of a really working and ever active population, absorbed for the most part in providing for the material wants of life, they would be in ready demand. Upon this syllogism he emigrated, and soon made the discovery, that as his premises were erroneous, so were his conclusions; and that the man who came among us to teach Sanscrit for a living, would fare almost as well as a breeches-maker might among kilted Highlanders.

The Rev. Isaac, therefore, very soon retraced his steps, converted by his great horror of American democracy—and, above all, their insensibility to his merits—into a warm admirer of his own country, and almost into a believer in the possibility of rising in the church without patronage. We have before at times quoted passages from this book, sufficient to show its general ill-informed and spleenetic judgments concerning every thing American. We mark a single one only to-day, to shew into what hands the clerical radical fell, on his arrival in this city:

The person at whose house we had taken lodgings was an Englishman, a painter, who informed me that he had lived some years in Liverpool; but from the heavy weight of rates, tithes, and taxes, he had not been able to gain a living. He still had a shop there, and intended to return if the reform bill should pass. He so often spoke with contempt and bitterness of kings, nobility, priests, and taxes, that it was evident at once under what denomination he might be classed. He was a radical, a gambler, a frequenter of Tammany Hall, and of the lowest society. I blushed to think that such a person and myself should have entertained similar sentiments on such a subject. He had gone to America to improve his condition, but had not found that improvement realized. He hated, and cordially railed at the American people, their manners, and the prejudices they entertained against the English. His wife, a most worthy and industrious woman, told us, that had her husband been industrious and careful, they might have saved money, and been independent, but that they could, with the same means, have been much more comfortable in Liverpool.

After we were somewhat settled, I found time to look around me, and consider what was passing. It seemed to me probable, that there was as much distress in New York, in proportion to the population, as in London. We saw and relieved several beggars in the streets of that city. The number, also, of paupers who were relieved by charity, was very great. I think the excessive charges for house rent and fuel must be severely felt by persons of slender means. There must be a great want of capital among coal and wood merchants, or a total absence of proper regulations. Sufficient fuel had not been provided to supply the regular consumption of the city; and its value became so enhanced in consequence, as to be almost out of the reach of the poor. The coals we consumed were double the price of what coals had cost in the summer. The coal-merchants had promised, before the winter commenced, that they would supply the people at summer prices. But promises are slight obligations, when put in competition with interest. We paid for coal at the rate of seventeen dollars a ton. While in England, we thought forty shillings a chaldron a high price; but in New York they were twice that sum.

SCOTT'S WORKS, Vol II.—comprising the seven numbers already published of Conner & Cooke's cheap edition—constitutes a very handsome volume indeed, large 8vo. Seven such will complete the work.

ON THE ADAPTATION OF EXTERNAL NATURE TO THE PHYSICAL CONDITION OF MAN, &c. &c. BY JOHN KIDD, M. D. &c. Regius Professor of Medicine at Oxford. Philadelphia, CAREY, LEA, & BLANCHARD.—This is the second of the Bridgewater Treatises, that of Professor Whewell, on Astronomy and General Physics, noticed in this paper some weeks ago, being the first. The design of all these treatises, of which there are to be eight, is, as most of our readers doubtless remember, to elucidate, in compliance with a proviso in the will of the late Earl of Bridgewater, "the Power, Wisdom, and Goodness of God, as manifested in the Creation." In order to stimulate adequate talent to undertake the work, eight thousand pounds were appropriated by the noble and reverend testator, to be paid for it, leaving to the author, moreover, the whole benefit to be derived from the sale of his writings. Whether wisely or not, it may yet be too early to determine, it has been deemed proper to divide the subject into eight parts, assigning £1000 to each. Hence the volume now before us. As a separate and popular treatise, embodying a train of facts, rather than entering into any controversial discussion, and pointing out skillfully, and often unexpectedly, evidences of the adaptation of the external world to the organization, wants, and powers of man,—it is certainly well executed, and fulfills satisfactorily its design. It is, too, so wholly free from scientific pretension, though written with full and well-considered knowledge, that it will attract many readers, whom an array of learned terms might have discouraged. It is a volume that may be read with satisfaction, even after Paley's comprehensive and admirable Natural Theology.

GREENBANK'S PERIODICAL LIBRARY, No's 1 to 7. T. K. Greenbank, No. 9, Franklin Place, Philadelphia.—This is the title of an octavo work in pamphlet form, issued weekly at \$5 per annum. It consists of Voyages, Travels, History, Biography, Select Memoirs, popular science, personal adventures, Poems, &c. &c., each No. containing 48 pages, and the whole, when bound in volumes at the end of the year, making a collection of 2500 pages; thus constituting a work which, if well selected, can only be rivalled in cheapness by the handsome edition of the Waverley Novels now publishing by Messrs. Conner & Cooke, of this city, another number of which has just appeared. Among the subjects of the numbers before us, we find Hazlitt's Travels in Europe—the History of Peter the Great—Mr. Lamb's admired Essays under the title of *Elias*—and "the History and Trials of Henry Pestalozzi," with copious extracts from his works, illustrating his

plan of Education—and lastly, a brief Memoir of Korner, the German poet, written by his father.

The history of this interesting character, though he left four volumes of writings upon a variety of subjects behind him, when he died at the early age of two and twenty, is but little known to the English reader, except through the poetry of Mrs. Hemans. It is well that a name so associated with deeds of valor and patriotic song, and that is dear to idolatry to every German heart, should be more familiar to our ears; and we therefore, though shrinking from thus mutilating the well told story of his romantic life, before us, venture upon a compendium of a Memoir which has given us almost thrilling pleasure in the perusal.

CARL THEODORE KORNER, born 23d Sept. 1791, was the son of a Saxon counsellor of appeals, who seems early to have appreciated the remarkable character of his son, even though his early childhood was not distinguished by that precocity of knowledge which, in some instances, so gratifies the vanity of parents. "Tenderness of heart, and strong affection for those who had won his love, united with singular firmness and strength of mind, and very quick and lively powers of fancy," are mentioned as the distinguishing features of his character at a very early period of his life. To these we may add, that a sentiment of piety, or, as phrenologists would term it, *reverence*, seems early to have been a marked quality of his natural disposition; and even when in extreme youth, and full of boyish vivacity, he conceived the idea of "a pocket-book for Christians," which was to consist of historical treatises, spiritual sonnets, and passages from scripture illustrated with engravings; a great part of which plan he actually executed while pursuing his academical career at Fryburgh. The eventful part of Korner's life commences about the age of 19, when, after leaving college, we find him at Vienna, full of youthful life and spirit, associating with Humboldt and Schlegel, and devoting his mornings to assiduous study; while his evenings were passed in the best society which that refined capital affords. His varied acquirements and high accomplishments here received their last finish; and the hopes of his judicious father, in placing the gifted youth "on a distinguished point where his mental horizon would be extended, and his inclination to advancement and to perfection incited and encouraged," were fully accomplished in the advancement made by Korner in general knowledge and reputation. He who had so energetically availed himself of every opportunity of studying books and men, became an author himself, and made the living world the test of his powers. The nature of his early studies, the habits of the last few months of his life, and the distinctions attending success as a dramatic writer at Vienna, with, perhaps, some strong prepossessions for the course of Schiller, with whom he was a favorite protégé at ten years of age, determined Korner to write for the stage.

His first essays, says his biographer, consisted of two one-act pieces, in Alexandrines—the Bride, and the Green Domino, which were both received with much applause. A farce called the Night-watch was also very successful. Korner now began to attempt subjects of a passionate and tragic nature, which had ever possessed great attractions for him. A tale of Heinrich von Kleist's was, with some alterations, worked up into a drama in three acts, called Toni. Soon after followed a terrific tragic piece, in one act, called the Expiation. He now considered himself prepared to venture on the production of the Hungarian Leonidas, Zriny. This was followed by an appalling drama, called Hedwig, and a tragedy called Rosamund, taken from English history. His last dramatic work of a serious kind, Joseph Heyderich, was founded on a real incident, the self-sacrifice of a brave Austrian subaltern officer, who devoted his own life to save that of his lieutenant. He still found time, notwithstanding these works, to produce three small comic pieces, the Cousin from Bremen, the Officer of the Guard (Wacht-Meister,) and the Governess; also two operas, the Fisher-girl, or

Hatred and Love; and the Four Years' Post (der vierjährige Posten,) as well as several small poems, and he also concluded an opera commenced some time before, the Miners (Die Bergknappen.) Part of an opera which he had written for Beethoven, The Return of Ulysses, was also ready, and he had, likewise, prepared a multitude of plans, both of small and large pieces. It would not have been possible to accomplish all this in the short space of fifteen months, had he not possessed great facility of composition, which he had acquired by his numerous early exercises. The collecting the historic materials, and sketching the plan, was what cost him most time; and, as an example of his rapidity, he was able to write a large work in the space only of a few weeks of entire seclusion and uninterrupted exertion. A summer's residence at Doblingen, an agreeable village near Vienna, afforded every facility of this kind.

His productions experienced, on the whole, a reception far beyond his expectations. The public feeling showed itself the most enthusiastically at the first representation of Zriny. The author was called to appear before the audience in person, an honor altogether unusual in Vienna. But the single voices of certain critical judges, the favorable opinion of the judicious few, was yet more gratifying to his feelings. The friendly judgment of Goethe reached him from afar; and, by his influence, the Bride, the Green Domino, and the Expiation, were brought out at Weimar, with particular care and with eminent success.

Korner was now, at the age of twenty, where most literary men have been contented at arriving, with an additional score of years upon their heads. Wealth, or at least a competency, was, as well as reputation, his; he received an official appointment from the Government, in consequence of the public approbation that attended his literary efforts, and everything seemed to combine to make his lot most enviable; while he still preserved that steadiness of soul which is both the companion and the guardian of magnanimity, and keeps the soaring mind from being chained down to the height of fame it has first won, by fixing its eagle ken upon the loftier elevations yet to be attained.

"The world of joy, (says the father of Korner) by which he was now surrounded, and in which he soon found himself at home, excited in him feelings of accordant kind. Far from being enervated by it, his ardent nature received a new impulse; all his faculties were excited: and the objects of his emulation were constantly placed higher. And no instructive, warning, or exciting voice was ever heard in vain, when it had once gained his esteem, whether by intellect, knowledge and experience, or by the charms of female accomplishment. In this manner he was much indebted, not only to the intimacy of Humboldt, and of Schlegel, but also to the elegant society which met at the house of the celebrated female poet, Caroline Pichler, and of Madame de Pereira. But it was to be attributed to a softer sentiment, that of love, that the faculties of his youth were preserved, unweakened, amid the perils of a seducing capital. A lovely being, as if sent by Heaven as his guardian angel, enchain'd him, both by the charms of beauty and of soul. Korner's parents came to Vienna, approved and blessed the choice of their son, and rejoiced in the effects of a noble and inspiring sentiment.

Love and literary distinction had now fully crowned this favored youth; but his soul panted for more. Martial glory had ever been a slumbering passion in his romantic bosom; and the cry of his oppressed country kindling the feelings of patriotism he possessed to an enthusiastic degree, called out the sentiment in all its ardor; and after the battle of Aspern, which he celebrated in a martial ode, nothing could restrain him.

"Germany rises" he wrote to his father: "the Prussian eagle by the beating of her mighty wings, awakes, in all true hearts the great hope of German freedom. My poetic art sighs for my country—let me not prove myself her unworthy son. Now that I know what happiness can ripen for me in this life—now that the star of fortune sheds on me its most cheering influence—now is this a sacred feeling which animates me?—this mighty conviction that no sacrifice can be too great for that greatest mortal blessing, our country's freedom! A great age requires great souls, and I feel, within myself, the fuel

of being as a rock amid this concussion of the nations. I must go forth—I must oppose my daring breast to the waves of the storm. Could I, think you, stand aloof, contented to celebrate with weak inspiration the success of my conquering brethren? I am aware that you will suffer much anxiety.—My mother too will weep—may God be her comfort!—I cannot spare you this trial. That I simply offer my life is of little import; but that I offer it, crowned as it is with all the flowery wreaths of love, of friendship and of joy,—that I cast away the sweet sensations which lived in the conviction that I have caused you no inquietude, no anguish,—this indeed is a sacrifice which can only be opposed to such a prize!"

There is nothing extant in any language to surpass the tenderness and heroism of this letter. Had it been lost by any accident, the brightest link in the dazzling chain of his life had been lost. It is from knowing not only the real worth of the offering which Korner made to his country, but the value which he himself put upon it, that we can appreciate his noble sacrifice to duty and patriotism. The following is a translation of his farewell address to his affianced bride:

Farewell, farewell!—with silent grief of heart  
I breathe adieu, to follow duty now;  
And if a silent tear unbidden start,  
It will not, love, disgrace a soldier's brow.  
Where'er I roam, should joy my path illume,  
Or death entwine the garland of the tomb,  
Thy lovely form shall float my path above,  
And guide my soul to rapture and to love!  
O hail and bless, sweet spirit of my life,  
The ardent zeal that sets my soul on fire;  
That bids me tak' a part in yonder strife,  
And for the sword, awhile, forsake the lyre.  
For, see thy minstrel's dreams were not all vain;  
Which he so oft hath hallow'd in his strain;  
O see the patriot strife at length awake!  
There let me fly, and silent toil partake.  
The victor's glorious wreath shall bloom more bright  
That's pluck'd amid the joys of love and song,  
And my young spirit hails with pure delight  
The hope fulfill'd which it hath cherished long.  
Let me but struggle for my country's good,  
E'en though I shed for her my warm life-blood,  
And now our kiss—e'en though the last it prove—  
For there can be no death for our true love.

Theodore Korner left Vienna on the 15th March, 1813, and arrived at Breslau just as Major Lutzow was forming the free corps which afterwards became so much distinguished under his name. The recommendations Korner had brought from Vienna to the most influential persons in the army, procured him a cordial reception in this gallant band; and entering as a private trooper, he so devoted himself to the service that he was soon elected a lieutenant by his comrades. Lutzow's free corps were solemnly consecrated in the village church of Zohlen, a choral hymn written by Korner being sung upon the occasion, and the clergyman administering to each member an oath to die for his country—"a consecration to death," as Korner calls it, which sunk deeply into his poetic mind, and perhaps suggested the forboding of his early fate which prompted some of his noblest verses, and sent him into battle with the stern zeal of one doomed of Heaven. The life of a partisan officer must have been Elysium to the adventurous and romantic spirit of Korner, as he and his bold comrades, like "Marion and his men," or, to go nearer home, like Schiller's band of robbers, would sally from the forest upon his country's invaders, and, by the music of his own war-hymns, charge upon the astonished foe. They who witnessed the effect produced by the German minstrels here in singing the following fine battle-song of Korner, can imagine how, in scouring the country, it must have rung from the throats of a thousand troopers:

Lutzow's Wild Chase.  
What is it that beams in the bright sunshine,  
And echoes yet nearer and nearer?  
And see! how it spreads in a long dark line,  
And hark! how its horns in the distance clang!  
To impress with a bright fear!  
And ask ye what means the daring race?  
This is—Lutzow's wild and desperate chase!  
See, they leave the dark wood in silence all,  
And from hill to hill are seen flying;  
In ambush they'll lie till the deep nightfall,  
Then yell, bear the horrah! and the rifle bulk!  
And the foe will be falling and dying!  
And ask ye what means their daring race?  
This is—Lutzow's wild and desperate chase!  
Where the vine boings twine, the Rhine waves roar,  
And the foe thinks his walls shall hide him;

But see, they fearless approach the shore,  
And they leap in the stream, and swim proudly o'er,  
And stand on the bank beside him!  
And ask ye what means the daring race?  
This is—Lutzow's wild and desperate chase!  
Why roars in the valley the raging fight,  
Where swords clash red and gory?  
O force in the strife of that deadly fight,  
For the spark of young Freedom is newly alight,  
And it breaks into flames of glory!  
And ask ye what means the daring race?  
This is—Lutzow's wild and desperate chase!  
See you warrior who lies on a gory spot,  
From life compelled to sever;  
Y et he never is heard to lament his lot,  
And his soul at its parting shall tremble not,  
Since his country is saved forever!  
And if ye will ask at the end of his race,  
Still 'tis—Lutzow's wild and desperate chase!  
The wild chase, and the German chase  
Against tyranny and oppression!  
Therefore weep not, loved friends, at this last embrace,  
For freedom has dawn'd on our lov'd birth-place,  
And our death shall ensure its possession!  
And 'twill ever be said from race to race,  
This was—Lutzow's wild and desperate chase!

The hand that traced these spirit-stirring lines, was also a complete master of the sword; and while painting, music, and dancing, in each of which he excelled, had not been neglected in Korner's education, he was also thoroughly skilled in horsemanship, a capital swimmer, and much practised in rifle-shooting. Such a soldier, with animal spirits that never tired, must have been the life of the corps of which he was a member, and, indeed, he was appreciated accordingly, as his commander made him adjutant to the regiment, for the express purpose of having one so valued near his own person. The promotion nearly cost him his life, as the following account by his biographer, of the peril encountered by that portion of the regiment to which Korner thus became attached, and which, separated from the rest, upon particular duty, fully shows:

The gallant troop acquired considerable renown, and harassed the enemy much, especially by cutting off his communications. A plan was in consequence laid by the French Emperor for the extirpation of the corps, that, as a deterring example, no man should be left alive. The armistice, concluded at this moment, afforded an opportunity for putting it in practice. (The Duke of Padua, it is observable, particularly profited by this armistice; for being shut up in Leipzig by generals Woronzow and Czernichef, with the co-operation of two battalions of the Lutzow infantry, he was only saved by this cessation of hostilities.)

Major von Lutzow had received official information of the armistice at Plauen. With out expecting to meet with any opposition, he chose the shortest route to rejoin the Infantry of his corps, having received the most confidential assurances of safety from the enemy's commanding officers, and proceeded along the high road, without interruption, to Kitzin, a village in the neighborhood of Leipzig; but here he found himself surrounded and menaced by a very superior force. Theodore Korner was despatched to demand an explanation, but instead of replying, the commander of the enemy struck him with his sword; and it being now twilight, a general attack was made on the three squadrons of the Lutzow cavalry before they had drawn a sabre. Several were wounded and taken, and others dispersed in the surrounding country; but Major von Lutzow himself was saved by the assistance of a squadron of Uhlans, who being in advance with the Cossacks, formed the vanguard, and consequently were not assailed at the same moment. He reached with a considerable body of his troops, the right bank of the Elbe, where the infantry of his corps and a squadron of its cavalry were already collected.

Korner received the first blow, which he was not prepared to parry, as he approached close to the enemy's commanding officer to deliver his message without drawing his sabre, and was thus severely wounded in the head: the second blow only inflicted a slight injury. He fell back, but speedily recovered himself, and his spirited steed bore him in safety to a neighboring wood. He was here occupied, at the first moment, with the assistance of a comrade, in binding up his wounds, when he perceived a troop of the enemy, who were in pursuit, riding towards him. His presence of mind did not forsake him, but turning towards the woods he called with a loud voice, "Fourth squadron—Advance!"—His stratagem succeeded—the enemy were appalled, drew back, and thus afforded him time to conceal himself deeper in the wood. It had now become dark, and he found a place in the thicket where he could remain undiscovered.

The pain of the deeper wound became very severe, his strength was exhausted, and his last hope was gone. It was in this extremity that he composed the beautiful sonnet, of which the following is a translation:

*Farewell to Life.*

Written in the night of the 17th and 18th of June, as I lay, severely wounded and helpless in a wood, expecting to die.

My deep wound burns—my pale lips quake in death,  
I feel my fainting heart resign its strength,  
And reaching now the limit of my life,  
Lord, to thy will I yield my parting breath.

Yet many a dream hath charmed my youthful eye:  
And must life's fairy visions all depart?  
Oh surely no, for all that fired my heart  
To rapture here, shall live with me on high.

And that fair form that won my earliest vow,  
That my young spirit prized all else above,  
And now adored as freedom, now as love,  
Stands in seraphic guise, before me now;

And as my fading senses fade away,  
It beckons me, on high, to realms of endless day.

This beautiful requiem was not, however, the last verses Korner was destined to write. His bleeding and senseless body was found by some peasants, and after being partially restored by their kindness, he was removed to Carlsbad; and, recovering from his wounds in a few months, he hastened back to his companions in arms, to meet the glorious fate which his prophetic soul had always whispered should crown his fortunate career. We give the account of his last moments without abridgment.

"Major von Lutzow had determined on conducting, in person, a part of the cavalry of his corps in an attack on the enemy's rear, which was to take place on the 28th of August. Towards evening they arrived at a place of refreshment provided for the French; the troops made use of it, and after two hours rest continued their march to a wood near Rosenberg. Here they concealed themselves while waiting the return of a scout, who was to bring them intelligence of the readiest way to a camp of the enemy which was badly guarded, at the distance of a couple German miles (stunden). In the mean time some Cossacks, who were placed on the look-out on a neighboring eminence, perceived a transport of ammunition and provisions, escorted by two companies of infantry. It was immediately determined to attack them, and the enterprise proved perfectly successful. Major von Lutzow ordered the Cossacks (about one hundred horse) to head the attack, and took half a squadron to fall on the flank of the enemy, leaving the remaining half where they were, in order to cover the rear. He himself led the assault made on the flank, and Korner acted as adjutant by his side. An hour previous to this, and during the rest in the wood, Korner produced his last poem, "The Sword Song." He had written it in his pocket-book in the dawn of the 26th of August, and was actually engaged in reading it to a friend when the signal for the attack was made.

On the high road from Gadebush to Schwerin, close to the wood which is situated about half a mile (halb-stund) from Rosenberg, the action took place. The enemy were more numerous than had been supposed, but after short resistance they fled, not having been cut off in sufficient time by the Cossacks, across a small plain to the neighboring grove of underwood. Among those who pursued them most boldly was Korner; and here it was he met with that glorious death which he had so often anticipated, and celebrated with so much enthusiasm in his poems!

The tirailleurs, who had quickly found a rallying point in the low wood, sent, from thence, on the pursuing cavalry a shower of balls. One of these struck Korner in the abdomen, after having passed through his horse's neck; it wounded the liver and spine, and deprived him of speech and consciousness. His countenance remained unchanged, and evinced no trace of any sensation of pain. Nothing was neglected that could tend to save him; his friends immediately raised him up; and of the two who hastened to assist him, through the continued fire on this point, one followed him about half a year after, who may be placed among the most noble and accomplished youths who were inspired, and who have inspired others, in the sacred cause—the noble Friessén. Korner was carefully carried to a neighbouring wood, and was delivered to the care of a skilful surgeon, but all human help was vain!

The action, which, after this loss, so universally regretted, took a very sharp direction, was speedily brought to a conclusion. The Lutzow cavalry pressed forward, like enraged lions, into the underwood, and all who could not escape were shot, sabred, or taken. The small but dear sacrifice of this day, which consisted, beside Korner, of Count Hardenberg, a very promising and interesting young man,

and a Lutzow yager, required now a worthy burial. The remains of the three valiant fallen soldiers were placed upon a carriage, and conducted in the van with the prisoners, and with the transport that was captured. The French troops, who had hastened forward, did not venture immediately to follow the train, as they occupied much time in scouring the wood, in which they suspected that troops were lying in ambush.

Korner was interred under an oak, near a mile-stone on the road from Lubelow to Dreikrug, near the village of Wobbelin, which is about a mile from Ludwigslust. He was buried with all the honours of war, and with all the marks of esteem and love of his deeply-affected brethren in arms.

Among those friends who covered his tomb with turf, there was one named von Barenhorst, a noble and accomplished youth, who found it impossible to survive such a death; and a few days after, being placed on a dangerous post in the battle of Goehrde, he threw himself on the enemy with these words: "Korner, I follow thee; (Korner Ich folge dir;)" and fell, pierced with many balls!

The sister of Korner died shortly after of a broken heart for the loss of her brother, and was buried in the same grave.

Thus when it had only shone for two and twenty summers, went out the light of one of the noblest souls that ever moved in the ranks of war;—thus was quenched one of the most glorious spirits that ever gave its breath to song. For scarcely since the young king of Israel led the anthems of triumph over the mockers of his country's God, subdued by his boyish arm, has the world witnessed the combination of early genius and chivalric heroism that met in Carl Theodore Korner.

#### SUMMARY.

*Madrid, May 28.*—With profound grief we announce to our readers the death of Mr. Charles S. Walsh, Secretary of Legation of the United States at this Court. This gentleman had been some time ill; till at length, having exhausted all the resources of medical science, he determined to try the effects of a change of air. Accordingly he left town, accompanied by his physician and a faithful attendant, in order to proceed to Valencia; but his sickness overcame him on the way, and he was obliged to stop at Quintanar de la Orden, where he fell a victim to the violence of a confirmed consumption. What makes the affliction more grievous, is the fact that he was cut off in the bloom of life, being not more than 32 years of age, and in the midst of a distinguished career.

The deputy of the Minister of the United States, who arrived at Quintanar soon after the death of Mr. Walsh, made arrangements for the celebration of funeral honors, with all the respect and decorum which time and circumstances would permit. There was no want of co-operation on the part of the authorities, civil and ecclesiastical; and he was interred (conformably to the intentions of said Minister) with all the honors due to his rank. Under this sad bereavement it may serve to console the family of this gentleman, to know that nothing has been omitted to prolong his life; that he was surrounded with all the aids which science and friendship could dictate, and that he died recognized by the Church as a Christian Catholic.

A few days since, as the President of the Ithaca and Owego Rail Road, in company with John Randal, Jr., the engineer in chief, and an assistant engineer, were traversing a part of the road, a thunder shower came on. The former person took refuge from the storm, in a shop, while the engineer and his assistant went on further, and sheltered themselves in a barn. While these persons were there, a flash of lightning struck the barn, knocked down the two gentlemen last mentioned, and killed a man and horse standing very close at their side.—[Albany D. Adv.]

[From the *Montreal Gazette*, 13th inst.]

The Honorable Mr. Cass, Secretary of War of the U. States, accompanied by the Honorable Isaac Hill, U. S. Senator for the State of New Hampshire, and Lieut. Prentiss, of the U. S. Army, returned from Quebec yesterday in the St. George steamer, took up their residence at the Exchange Coffee House, and proceeded this morning by the Upper Canada Stages on their way to the Falls of Niagara, &c. It is to be regretted that the short stay made by the Secretary of War, as well as the strict privacy which he maintained both here and at Quebec, should have prevented

his receiving the attentions of (which he seemed so studiously to avoid) the citizens of both places would have felt happy in bestowing upon this distinguished ornament of the present American Cabinet.

**Large Guns.**—The largest guns ever fired are the Turkish cannon at the Dardanelles, the diameter of which is two feet three inches, and a stone shot from which struck the Windsor Castle, of 98 guns, and cut her mainmast almost in two, and nearly knocked her two decks into one. Our young midshipmen used to crawl into these guns on their hands and knees. A gun almost as large was found at Algiers. But the largest shot of any sort ever fired by Europeans, was that from the new mortar used by the French at Antwerp. This shell was two feet in diameter, and weighed when empty, 916 lbs. It contained 99 lbs of powder, and its total weight was consequently 1,015 lbs.—The mortar from which it was discharged, weighed 3,700 lbs. and the gunpowder to load it was 30 lbs.—This was really prodigious. We must add, that at the Dardanelles, one of the great Turkish shot struck the bows of that magnificent ship the Royal George, and wonderful to relate, that one shot alone nearly sunk her. According to the Baron de Tot, the weight of the Turkish shot was 1,000 lbs, and the charge of gun powder 330 lbs.—[London pa.]

**COLLEGE OF PHYSICIANS.**—The fifth public assembly took place on Monday evening. The literary attraction of the evening was an elegant paper, from the pen of Sir Henry Halford, and read by himself, "On the deaths of certain eminent persons of antiquity," from which the audience were given to understand that Sylla, the Dictator, died of an abaceas; Flaccus of pleurisy; and Pomponius Atticus, of dysentery, after having left off food and physic. The paper went into an interesting and amusing parallel between the poisoning of Britannicus by Nero, and that of Sir Theodosius Boughton by Donellan, in our own country, about half a century ago, both deaths having been produced by laurel water; and, in conclusion, the last 10 days of Alexander were described with as much minuteness as if the Macedonian hero had been a patient of the favourite physician of George the Fourth.

The President has recognized Charles Augustus Heckscher as Consul of the Duke of Mecklenburg Schwerin. Also, George Follin as Vice-Consul of Mexico for the port of Philadelphia.

**DEPARTMENT OF STATE, JULY 8.**—Information has been received from our Consul, George Moore, Esq. at Trieste, that a Light House has been erected on the extremity of the Teresian Mole, which forms the southwestern side of the harbor of the city. The light is elevated about one hundred and thirty feet above the water, and may be seen from the deck of a vessel at the distance of thirteen miles. In order to distinguish it from all others on the coast, the light is made to intermit, so as to appear for half a minute, then disappear for the same length of time alternately.

**NAVY DEPARTMENT, JULY 8.**—The fleet Surgeon in the Mediterranean, under date of April 4, on board the frigate United States, writes:

But one death from sickness has occurred in the squadron for three months, which was on board this ship, being the first victim of disease since leaving America.

No death has occurred in either the Constellation or the John Adams during the last three months.

**Industry.**—Man must have occupation or be miserable. Toil is the price of sleep and appetite, of health and enjoyment. The very necessity which overcomes our natural sloth is a blessing. The whole world does not contain a priar or a thorn which divine mercy could have spread. We are happier with the sterility, which we can overcome by industry, than we could have been with spontaneous plenty and undoubted profusion. The body and the mind are improved by the toil that fatigues them. The toil is a thousand times rewarded by the pleasure which it betows. Its enjoyments are peculiar. No wealth can purchase them, no indolence can taste them. They flow from the exertions which they repay.

**Destructive Fire.**—A correspondent at Watertown, Jefferson county, announces the following unwelcome intelligence.

"We have this morning added to the list of our heavy calamities by fire and flood, the loss of the large cotton factory of Messrs. L. Beebe & Co. It was discovered to be on fire about 11 o'clock this morning, (Sunday, 7th July,) and so rapid was the progress of the destroying element, that in less than an hour, the entire pile of buildings was a heap of ruins. But very little of the property which the building contained was saved. Raw cotton, manufactured goods, and the extensive and valuable ma-

chinery, all went together. The loss is from 150 to 200,000 dollars.

This factory was one of the most perfect and extensive in the state. It was built of stone, five stories high, and of great value, aside from the large capital invested in it.

In addition to the above, the Jefferson Reporter, extra, of the 7th inst. states, that the fire was supposed to have been caused by spontaneous combustion, and that but \$25,000 was insured.—[Albany Argus.]

A copper mine has recently been discovered near Honesdale, Pa. which is likely to prove an extensive and permanent source of wealth to the owner. The ore is said to be of excellent quality. A mine of iron ore has recently been found in Sandy Creek township, Mercer county, in a neighborhood possessing great advantages in timber and water power.

**India Rubber Table Cloths.**—We have recently seen, and have in our possession, a sample of a new and superior kind of covers for tables and stands. They are manufactured by Samuel Steele & Co., Woodbury, Ct. They are composed of cotton, with a composition of India rubber, &c. varnished and bronzed in an elegant manner. They cost but little more than the common oil cloth, and are much superior both for beauty and durability. One very important quality which they possess over any oil covers, is their elasticity, as they can be doubled in every possible manner, without breaking or injuring the composition of which they are made.—[Danbury Her.]

Dr. Scudder, of this city, has invented a torpedo, with which he is determined to destroy the Sea Serpent. He has secured a patent for his invention, and intends to start for Nahant this morning. The same weapon, the Doctor thinks, will be useful to whalemen, and others who are in pursuit of large fish.—[Gazette.]

**Patriotism of the Clergy during the Revolutionary War.**—Two minister's sons, in the County of Essex, whose fathers were out in the great struggle for American liberty and independence, met not long since. After talking over some of the events of that period, one says to the other, "I believe my father did more than any other minister in the State."—

"How so?" says the other, "what did he do?"—

"Why, he sent three sons into the field." The other replied, "My father did more; he went himself, and took four with him."—[Salem Gaz.]

The SEA SERPENT seems to have a great predilection for the fashionable watering-places. After making Nahant his place of summer resort for the last few years, it appears by a correspondent of the Journal of Commerce of this morning, that he has lately been whisking his tail in the surf of Long Branch; and it is said, that among the attractions of the new Hotel now "in erection" at Rockaway, is to be a curiously contrived verandah towards the sea, for the especial purpose of watching the gambols of his snakeship. Having brought his family with him upon this visit, the amiable traveller may be expected to remain for some time, and give us all more or less an opportunity of cultivating their interesting acquaintance. Should one of the animals be caught alive,—as we see no reason why they should not, as the row-boat, which was within twenty feet of the largest, might, with some adroitness, have thrown a coil of rope over his head, and let the steambat at hand tow him ashore,—he might be lodged to advantage in the Corporation Reservoir, at the head of Broadway; or kept, if unruly, in the admirable Eel-case which Mr. Holt has provided for such attenuated figures, when needing a straight jacket. In the mean time, as the Soe Ormen, as the Norwegians call it, is likely to succeed Black Hawk as the lion of the day, it may be well to take a retrospective glance at his biography, which is thus given in the Boston Mercantile Journal, edited by Mr. Thatcher, of some literary celebrity:

The earliest account of an animal of this general description is furnished by Pantoppidou, Bishop of Bergen in Norway, and author of an old Natural History, in the first editions of which is a picture of the serpent. This gives him a mane—an appearance doubtless caused by his rapid motion through the water. He says, it lay on the water, when it was calm; and when it moved, parts of the back were to be seen in the line of the head. The color was dark brown,

variegated with light spots or streaks. The animal appeared regularly many years off the Manor of Nordland, in July and August, where all the inhabitants were familiarly acquainted with him, though the Bishop doubted the whole story for a long time. He represents the length to have been 600 feet, and the size that of two hogheads!—a statement which furnishes rather curious food for discussion. It was at least an immense exaggeration of the ignorant peasants and fishermen.

The Bishop also cites a letter, dated 1751, from a Captain in the Swedish Navy, De Ferry, relating to a snake seen by him near Molne, on a calm hot day in August, 1746. He fired at it, on which it immediately sunk. Observing the water to be red, he supposed he had wounded it. The head, he relates, was like that of a horse—and of a grayish color—the mouth was quite black and very large. He also mentions the bright mane. The eyes were black, and there were seven or eight thick folds, about six feet distance from one another. This letter was sworn to before the Bergen magistrates.

In 1804, Allen Bradford, Esq. then of Maine, addressed a letter to J. Q. Adams, then Secretary of the American Academy, transmitting documents to show that a large sea-serpent had been seen in and about Penobscot Bay. The Academy laid them aside, and they first appeared in Silliman's Journal, in 1820. One was a letter from the Rev. Mr. Cummings of Sullivan, Maine, dated August 1803; and another was dated August, 1804. The animal was seen by Mr. Cummings, his wife, daughter, and another lady, as they were on their passage to Belfast, between Cape Rosoi and Long Island. It was in the month of July; the sea was calm; there was very little wind; and the first appearance of the Serpent was near Long Island. Mr. C. supposed it to be a large shon of fish, with a seal at one end of it; but he wondered the seal should rise out of the water so much higher than usual; as he drew near, they discovered the whole appearance to be one animal in the form of a Serpent. He had not the horizontal, but an ascending and descending serpentine motion. This account also refers to the description given by other persons of similar animals.

A letter of March, 1781, from Capt. Little, of our Navy, to Mr. Bradford, states that in May, 1780, as he was lying in Broad Bay (Penobscot,) in a public armed ship, he discovered at sunrise, a large Serpent, coming down the bay on the surface of the water.—The cutter was manned and armed; he went himself in the boat; and when within 100 feet of the Serpent, the marines were ordered to fire on him; but before they could make ready, he plunged into the water.—He was not less than 45 to 50 feet long; the largest diameter of his body was supposed to be 15 inches; and his head, nearly the size of that of a man, he carried four or five feet out of water. He wore every appearance of a Black Snake. He was afterwards pursued, but they never came nearer to him than a quarter of a mile. A Mr. Joseph Kent, of Marshfield, says Capt. Little, saw a like animal at the same place in the year 1751, which was longer and larger than the main boom of his sloop, of 85 tons. He observed him within ten or twelve yards of his vessel.

The declaration of Eleazar Crabtree is then given, who lived at Fox Island, in the Bay of Penobscot, in the year 1777 and 1773. He has frequently heard of a sea-monster frequenting the waters near the shore; and doubting the fact, he went down one day upon receiving information from a neighbor, that he was then in the sea near his house. He saw a large animal in the form of a Snake, lying almost motionless in the water, about 500 feet from the bank where he stood. His head was about four feet above the surface; he appeared a hundred feet long; and he supposed him to be three feet in diameter. Many other inhabitants, upon whose veracity he could depend, had also declared to him that at other times they had seen such an animal.

After some other and equally strong testimony added to the above, we come down to the year 1815, when one of these monsters was seen off Plymouth, in the month of June, by several reputable witnesses; and from that time to the present his continued visits to the eastern coast have been witnessed by so many persons of high respectability, and testified to upon oath publicly administered, that though the Horse Mackerel taken by the Boston party cruising for the Sea Serpent, brought his existence for a while into discredit, no reasonable person can now pretend to doubt it. Those wishing for further details on the subject, are referred to Gray & Bowen's edition of Buffon.

## THE GIRARD COLLEGE.

Mr. BIDDLE'S ADDRESS on laying the foundation stone of the Girard College near Philadelphia, on the 4th inst. and which is published below, will be read with interest and admiration. The topics so judiciously selected and eloquently enforced by the speaker, are of public concernment and general application; for although the immediate objects of the bounty of Mr. Girard are to be selected from the single state of Pennsylvania, the effects of that bounty will be felt throughout our whole land in the race of thoroughly educated men, who will be thus rescued from the sufferings, exposures and temptations of orphanage. For it cannot be too often repeated, nor too urgently enforced, that in our land, and with our free institutions, more than any where else, is education both a duty and power; and they only are the true friends of the people, who strive in all ways for their solid instruction—distraining to minister to their passions or their prejudices, but seeking always to appeal to, and when opportunity offers to enlighten, their understanding.

## ADDRESS,

By NICHOLAS BIDDLE, Esq., Chairman of the Trustees of the Girard College for Orphans, pronounced by request of the Building Committee, on the occasion of laying the corner stone of the edifice, July 4th, 1833.

FELLOW CITIZENS:—We have now witnessed the laying of the corner stone of the Girard College for Orphans. That stone, simple, massive and enduring, fit emblem of the structure to be reared from it, and of the man whose name it bears, has been deposited in its final resting place. The earth received it.—To-morrow the earth will cover it. Ours are the last eyes which shall look upon it, and hereafter it will lie in its silent repose, unmoved by all the revolutions of the changing world above it.

And yet from out that depth is to rise the spirit which may more influence the destiny of ourselves and our children, than all else the world now contains. The seed that has been planted is of the tree of knowledge—that growth which gives to existence all that renders it attractive—flowers for our early youth—fruits in maturer life, and shelter for declining years. It is that knowledge, which, trampling down in its progress the dominion of brutal force, and giving to intellect its just ascendancy, has at length become the master power of the world. No people can now be distinguished, or prosperous, or truly great, but by the diffusion of knowledge—and in the stirring competition of the roused spirits of our time, the first glory and the highest success must be assigned to the best educated nation. If this be true in our relations abroad, it is far more true at home. Our institutions have boldly ventured to place the whole power of the country in the hands of the people at large, freed from all the great restraints which in other countries were deemed necessary. In doing this, the reliance is entirely on the general intelligence and education of the community, without which such institutions can have neither permanence nor value. Their brilliant success has hitherto justified that confidence, but as our population becomes concentrated into denser masses, with more excited passions and keener wants, the corrective influence of instruction becomes daily more essential. The education then of the people which elsewhere is desirable or useful, becomes with us essential to the enjoyment, as well as to the safety of our institutions. Our general equality of rights would be unavailing without the intelligence to understand and to defend them—our general equality of power would be dangerous, if it enabled an ignorant mass to triumph by numerical force over the superior intelligence which it envied—our universal right to political distinction, unless the people are qualified for it by education, becomes a mere abstraction, exciting only an abortive ambition. While, therefore, to be uneducated and ignorant, is in other countries a private misfortune, in ours it is a public wrong; and the great object to elevate the standard of public instruction to the level—the high table land—of our institutions. It is thus that this day has been appropriately chosen for the present solemnity.

It is fit that the anniversary of that day when our ancestors laid the broad foundations of our public liberties—on that day when our countrymen, throughout this prosperous empire, are enjoying the blessings which those institutions confer,—we, in our

sphere of duty, should commence this great work, soeminently adapted to secure and perpetuate them.

This truth no man felt with a deeper conviction than our distinguished fellow citizen, whose history and whose design in founding this institution may aptly occupy, for a few moments, our attention.

Of these, now that the tomb has dissipated all the illusion which once surrounded them, we can speak with the impartiality of history; and here, on this chosen spot, the scene of his future fame, we may freely bestow on his memory the homage which his unassuming nature would have shunned while living.

We all remember, and most of us knew him—Plain in appearance, simple in manners, frugal in all his habits, his long life was one unbroken succession of intense and untiring industry. Wealthy, yet without indulging in the ordinary luxuries which wealth may procure—a stranger to the social circle—indifferent to political distinction—with no apparent enjoyment except in impelling and regulating the multiplied occupations of which he was the centre,—whose very relaxation was only variety of labor, he passed from youth to manhood, and finally to extreme old age, the same unchanged, unvarying model of judicious and successful enterprise. At length, men began to gaze with wonder on this mysterious being, who, without any of the ordinary stimulants to exertion, urged by neither his own wants, nor the wants of others,—with riches already beyond the hopes of avarice, yet persevered in this unceasing scheme of accumulation; and possessing so much, strove to possess more as anxiously as if he possessed nothing. They did not know that under this cold exterior, and aloof in that stern solitude of his mind, with all that seeming indifference to the world and the world's opinions, he still felt the deepest sympathy for human affliction, and nursed a stronger, yet a far nobler and wiser ambition, to benefit mankind, than ever animated the most devoted follower of that world's applause. His death, first revealed, that all this accumulation of his laborious and prolonged existence, was to be the inheritance of us and of our children,—that for our and their comfort, the city of his adoption was to be improved and embellished, and above all, that for their advancement in science and in morals, were to be dedicated the fruits of his long years of toil.

It required the self-denial of no common mind to resist the temptation of being himself the witness and the administrator of this bounty, and to have abstained from enjoying the applause of his grateful countrymen, who would have acknowledged with affectionate respect, the benefits which they derived from him. Yet even this secret and prospective munificence must have had its charm for a mind like his; and we may well imagine that the deep and retired stillness of his spirit was often soothed with the visions of the lasting good, and perhaps, too, of the posthumous glory, which he was preparing. Such contemplations he might well indulge, for to few have they been so fully realized. From the moment that foundation stone touched the earth, the name of Girard was beyond oblivion. From this hour, that name is destined to survive to the latest posterity, and while letters and the arts exist, he will be cited as the man who, with a generous spirit, and a sagacious foresight, bequeathed, for the improvement of his fellow men, the accumulated earnings of his life. He will be remembered in all future times by the emphatic title with which he chose to be designated, and with which he commences his will—a title by which we ourselves may proudly recognize him—as "Stephen Girard of the city of Philadelphia, in the Commonwealth of Pennsylvania, Merchant and Mariner"—the author of a more munificent act of enlightened charity than was ever performed by any other human being.

His will indeed be the most durable basis of all human distinction—a wise benevolence in the cause of letters. The ordinary charity which feeds or clothes the distressed, estimable as it is, relieves only the physical wants of the sufferer. But the enlightened benevolence which looks deeper into the wants of our nature—which not merely prolongs existence, but renders that existence a blessing, by pouring into these recesses of sorrow the radiance of moral and intellectual cultivation—this it is which forms the world's truest benefactor, and confers the most enduring of all fame. His glory is the more secure, because the very objects of that benevolence are enabled to repay with fame the kindness which sustains them.

It is not unreasonable to conjecture that in all future times, there will probably be in existence many thousand men who will owe to Girard the greatest of all blessings, a virtuous education; men who will

have been rescued from want and perhaps from vice, and armed with power to rise to wealth and distinction. Among them will be found some of the best educated citizens, accomplished scholars, intelligent mechanics, distinguished artists, and the most prominent statesmen. In the midst of their prosperity, such men can never forget the source of it, nor will they ever cease to mingle with their prayers and to commemorate with their labors, the name of their great benefactor. What human being can be insensible to the happiness of having caused such a succession of good through remote ages, or not feel that such applause is more grateful than all the shout which ever rose from the bloodiest field of battle, and worth all the vulgar fame of a hundred conquests!

The general designation: the resources of the institution are proportioned to its purposes, and characteristic of him who did nothing which he did not do well.

After the building shall have been completed, there will remain the annual income of two millions of dollars, now yielding \$102,000, and if these funds should be inadequate for all the orphans applying for admission, the income of nearly all the remainder of the estate is to be appropriated to the erection of as many new buildings as his square in the city would have contained. So that in general, it may be stated with reasonable confidence, that when all the buildings are ready for the reception of the pupils, there will be available for the maintenance of the institution, an income of not less than one hundred thousand dollars, which may be increased to at least two hundred and twenty thousand dollars.

These ample funds are to be devoted to the maintenance and education of "poor male white orphan children." Of all the classes of human indigence there are none more helpless and none more entitled to our sympathies than these children of misfortune. They have lost their natural protectors. The arts which have hitherto embraced and sustained them, have been folded in death. They began life in comfort, perhaps in affluence; but now they stand alone, abandoned and helpless, to struggle against the world's coldness, with precarious means of subsistence, with no means of instruction, and treading on that narrow and slippery verge which too often separates want from crime. From this friendless condition they are rescued by the benevolence of Girard, who not merely provides the means of subsistence, but redressing the wrongs of fortune, raises them at once in the scale of being, and qualifies them to be useful members of that society which they would otherwise disturb or corrupt.

How wide the limits of that benevolence may be, it is impossible to conjecture. If the imperfection of language suggests a doubt as to the degree of designation which makes an "orphan," the greater weakness of our nature forces upon us the melancholy inquiry,—What child is there who may not be a poor orphan? Who is there indeed among us whose children may not yet need the blessings of this institution? Let none of us in the confidence of prosperity deem his own offspring secure. Alas! all our prosperity is so vain and shadowy, and misfortune is so constantly in ambush to assail us, that it were presumptuous in any of us to suppose himself beyond the reach of vicissitudes, which would render such an institution the happiest refuge for his children. Yes, fellow citizens, this college is our own; the property of us all. It is intended to remedy misfortunes to which we are all equally liable. And it should be a source of great consolation to each of us, that if, in the ever varying turns of human life, misfortune should overtake, and death surprise us, they who bear our names, and are destined to be the fathers of our descendants, will here find a home where they may be prepared for future usefulness, and become in turn the protectors and support of their more helpless relatives.

Hereafter, thanks to the bounty of Girard, every father among us may, on his death-bed, enjoy the reflection, that although unprovided with fortune, there is secured to his sons that which is at once the means of fortune, and far better than the ampest fortune without it,—a good education. This consideration, if any such incentive were wanting, may serve to stimulate the sense of public duty in those who administer the institution, to render it worthy of their own children.

For this purpose happily, it is only necessary to fulfil the design of the founder, which provides ample means and expressly enjoins the employment of them, to give every kind of liberal and useful instruction.

They would much err, who, comparing this institution with any ordinary standard, regard it as an Alm House, or a Poor House, in which a certain number of paupers live, housed together, to be kept

from harm, are to receive some hasty rudiments of instruction, and then to be thrust out on the world to make way for a similar swarm of unfortunate children. By no means. The comprehensive benevolence of Girard looked to a higher and better things. It is not a poor school, nor a charity school, nor a free school, in their ordinary acceptation. It is, as he denominates it, a "College." The peremptory prohibition that "no distinctive dress should ever be worn," reveals his purpose that these youths shall not be designated as objects of remark or contempt by their contemporaries—that they shall be distinguished only by their conduct, and shall not wear the livery even of charity. The instruction too required, is of the highest character, embracing almost every thing worthy of being studied in the circle of human knowledge. "They shall be instructed," says he, "in the various branches of a sound education, comprehending reading, writing, grammar, arithmetic, geography, navigation, surveying, practical mathematics, astronomy, natural, chemical, and experimental philosophy, the French and Spanish languages—I do not forbid, but I do not recommend the Greek and Latin languages—and such other learning and science as the capacities of the several scholars may merit or warrant."

This excludes nothing—nay, it embraces every thing necessary to form a well educated man. How far this instruction is to be carried—whether when the degrees of talent and disposition come to be analysed, some are to be instructed up to the point of their appropriate capacity, while the more intelligent and more diligent are to be carried into the higher regions of science, are questions of future administrations, to be decided by experience. But it is manifest that all the means of education, thorough, perfect education, are to be provided; that every facility for the acquisition of knowledge should be at hand; nor is there any reason why the Girard College—liberally endowed beyond all example—should not be superior to any existing establishment, in the talents of its professors or the abundance of its means of instruction; and with the blessing of God, so it shall be. There shall be collected within these walls all that the knowledge and research of men have accumulated to enlighten and improve the minds of youth. It will be the civil Westpoint of this country, where all the sciences which minister to men's happiness, and all the arts of peace, may be thoroughly and practically taught. Its success will naturally render it the model for other institutions—the centre of all improvement in things taught no less than in the art of teaching them—the nursery of instructors as well as pupils;—thus, not merely accomplishing the direct benefit of those to whom its instruction extends, but irradiating by its example the whole circumference of human knowledge.

To this intellectual cultivation will be added that, without which all instruction is valueless, and all learning the mere ability for evil—that moral discipline which makes men virtuous and happy at their own firesides. "My desire is," says he, "that all the instructors and teachers in the college shall take pains to instil into the minds of the scholars, the pure principles of morality, so that on their entrance into active life, they may, from inclination and habit, evince benevolence towards their fellow-creatures and a love of truth, sobriety and industry." When this harmony between the heart and the understanding ceases, mere knowledge is a curse, and men become intellectual statues, with the perfect forms of manly exterior, but cold, and selfish, and worthless to the community which endures them. Our youth too will not fail to be deeply imbued with that enthusiastic devotion to republican government, and that knowledge of his public rights and duties, which should form the basis of the American character. It is thus that the founder strictly enjoins, "that by every proper means, a pure attachment to our republican institutions, and to the sacred rights of conscience as guaranteed by our happy constitution, shall be formed and fostered in the minds of the scholars."

Nor need there be any dread that such an education will disqualify them for their pursuits in after life. In this country all pursuits are open to all men, nor need the humblest citizen despair of the highest honors of the republic. They err who suppose that because men are instructed, they may desert the ordinary walks of employment. There never can be such an over-education of the mass of the people. Men labor not for a want of knowledge, but for want of bread. The cultivation of the mind, like the cultivation of the soil, only renders it more productive, and knowledge becomes the best auxiliary to industry by rendering the laborer more intelligent and more ambitious to excel. The youths thus instructed will go forth into the various pursuits of life, many of which are in their nature mechanical; but

they will begin with the disposition and the power not merely to excel in them, but to rise beyond them; and they will emerge from their workshops, as their countrymen Franklin, and Rittenhouse, and Godfrey, and Fulton did before them, reaching all the distinctions of the State which may be honorably won, by talents and character.

That the scene of so many blessings may be appropriate to them, it is intended to make this structure worthy of its great object;—worthy of the name of its founder, and of the city which he was so anxious to embellish. Among the sciences most needed in a country, where individual wealth is hastening to indulge its taste and where every state and city and country requires extensive public buildings, is architecture. Indispensable in the rudest forms of life, it becomes the highest ornament of the most enlightened. In every stage of its progress, the style of its public works displays the character of the nation which bears them. Disproportioned and grotesque among a coarse and unlettered people—in nations more advanced, often over-ornamented with the gay profusion and the caprices of tasteless wealth—it is only when sustained by the public spirit of a community at once enlightened and generous, that architecture attains its highest glory—a refined simplicity. Of that perfection it is proposed that this structure shall present a model, the equal at least of similar works in any other country, and not unworthy of the best days of antiquity—a structure which will at once gratify the honorable pride of every citizen of the United States, and form the best study for all the branches of industry connected with architecture.

The enjoyment of so many advantages devolves on us, fellow-citizens, the duty of great care and vigilance to preserve them.

After bestowing upon our city this rich inheritance, Girard adds this emphatic declaration. "In relation to the organization of the College and its appendages, I leave necessarily many details to the Mayor, Aldermen, and Citizens of Philadelphia, and I do so with the more confidence, as, from the nature of my bequests and the benefit to result from them, I trust that my fellow-citizens of Philadelphia will observe and evince special care and anxiety in selecting members for their City Councils and other Agents."

That the generous confidence with which he has thus committed to us the execution of his great designs, should never be betrayed; we owe equally to the name of the founder and to the interests of our posterity; as the whole value of this institution will depend entirely on the administration of it. For myself and my colleagues, to whom the high honor has been assigned of sharing in that administration, I can only say, fellow citizens, that we have assumed the trust with the deepest sense of its responsibility, and a determination to execute it in the spirit of enlightened benevolence which animated the founder; and we shall in our turn retire from it, with the hope that our fair city may always find successors who to equal zeal, add greater ability to serve it.

Under such auspices, we confidently trust that all the expectations of the founder will be realized. With this delightful anticipation, we now invoke the blessing of God on this great undertaking.

In the name of *Stephen Girard of the city of Philadelphia, in the Commonwealth of Pennsylvania, Merchant and Mariner*, we lay the foundation of this *Girard College for Orphans*. We dedicate it to the cause of CHARITY, which not only feeds and clothes the destitute, but wisely confers the greatest blessings on the greatest sufferers;

To the cause of *Education*, which gives to human life its chief value;

To the cause of *Morals*, without which knowledge were worse than unavailing; and finally,

To the cause of our *Country*, whose service is the noblest object to which knowledge and morals can be devoted.

Long may this structure stand, in its majestic simplicity, the pride and admiration of our latest posterity; long may it continue to yield its annual harvest of educated and moral citizens to adorn and to defend our country. Long may each successive age enjoy its still increasing benefits, when time shall have filled its halls with the memory of the mighty dead who have been reared within them, and shed over its outward beauty the mellowing hues of a thousand years of renown.

#### Sketch of the Proposed Building.

The College is located on a tract of land containing forty-five acres, formerly known by the name of Peet Hall, situated on the Ridge Road, 1 1/4 miles from the city. This estate was purchased from Mr. William Parker, by Mr. Girard, a short time before his death, for the purposes of the College.

The building is peripteral, being 160 feet front, by 217 feet on the flank, including the porticos.

The columns are 6 feet in diameter at the base, and 54 feet 6 inches high, including capitals and bases. The order is Grecian Corinthian, from the monument of Lysicrates, or Lantern of Demosthenes, at Athens.

The superstructure reposes on a casement, in the form of a truncated pyramid, composed of 12 steps surrounding the whole building. The passage between the columns and the walls of the cell is 15 feet.

All the columns, entablature, and pediment, are to be composed of white, and the cell of light blue marble. The floors, and stairways, are also to be composed of marble.

The vestibules are each 26 by 48 feet: they are ornamented with 16 rich Ionic columns, antae, and entablature, supporting a ceiling embellished with lacunari.

Each story contains four rooms 50 feet square in the clear. The two rooms across the south end of the first story, are divided from each other by marble columns and entablature of the Corinthian order, so that they may be used as one room, for the purpose of exhibitions, &c.

The whole building is to be heated by means of furnaces placed in the cellar.

The college is located parallel with the city streets, fronting the south. The land at the base of the building is 26 feet above the reservoir on Fair Mount. The whole height of the edifice is 97 feet, making the elevation of the roof 123 feet above the said reservoir.

#### POETRY.

##### THE FATHERS VERSIFIED.

Mr. Moore in his *Travels of an Irish gentleman in search of a Religion*, says, "by way of keeping the virgin in good humor, as well as the fathers as with myself, I occasionally translated into verse some of the most fluid passages which occur in these writers, and laid them, in double homage, at once, of poetry and piety, at her feet. With these half-tender, half-saintly strains, the lady was, as may be supposed, inexpressibly delighted. The task of copying them out the most delicate erow-quills were devoted; and it was the first time, I dare swear, in the annals of gallantry, that the names of St. Basil, St. Gregory, and St. Jerome were fated to shine forth in the pages of a morocco covered almanac." Thus St. Chrysostom:

"Why come ye to the place of prayer  
With jewels in your braided hair?  
And wherefore is the house of gold  
By glittering feet profanely trod?  
As if, vain things, ye come to keep  
Some festival, and not to weep?  
Oh! prostrate weep before that Lord  
Of earth and heaven, of life and death,  
Who blights the fairest with a word,  
And blights the mightiest with a breath.  
God! 'tis not th' in bright array  
Such sinful souls would dare to pray.  
Vainly to anger'd heaven ye raise  
Luxurious hands where diamonds bling,  
And she who comes in broider'd veil  
To weep her frailty, still is frail."

"The same humility furnished me with rather a curious passage, showing how just this saint's notion of female beauty, and how independent of the aid of ornaments was its natural power in the eyes."

"Behold," thou say'st, "my gown is plain,

My sandals are of texture rude:

Is this like one whose heart is val-

Like one who dresses to be woo'd?

Deceive not thus, young maid, your heart;

For far more oft in simple gown

Both beauty play the tempter's part,

Than the brocades of rich renown;

And homely garb hath oft been found

When typed and moulded to the shape,

To deal such shafts of mischief round

As when men can scarce escape."

Saint Gregory of Nazianzus, who himself wrote poems, and was the only one of the fathers of the first four centuries who did so, is thus rendered:

"Let not those eyes whose light forbids

All love unlovely, even learn to stray,

But save within thy snowy lids

Like timid virgins in their chambers stay,

Keeping their brightness to themselves all day.

Let not those lips by man be won,

To breathe a thought that warms thy guileless bosom;

But, like May-buds, that fear the sun,

Shut up in rosy silence, ever rest—

Flame, that speaks the malice's sweet thoughts best."

But St. Basil comes nearer Little's poems:

"There abides an all-pervading grace,

A charm diffused through ev'ry part,

Of perfect woman's form and face,

That steals, like light, into man's heart.

Her look is to his eye a beam—

Of loveliness that never sets;

Her voice is to his ear a dream,

Of melody it ne'er forgets.

Alike in motion or repose,

Awake or slumbering, sure to win,

Her form, a vase transparent, shows

The spirit's light enshrin'd within,

Not charming only when she talks,

Her very silence speaks and sings;

Love guides her pathway when he walks,

And lights her couch when she repose.

Let her, in short, do what she will;

The commanding for which man striv'd was her;

So powerful is that magnet still  
Which draws all souls and senses to her."

This ancient is afterwards kept in countenance by a paraphrase of a modern Balmus, a staunch Calvinist:—

"Now, perhaps, having taxed my poetical art,  
To indite you this erudit letter,  
You're enough of the sex, after all, in your heart  
To like a few kisses much better.

"And in sooth, my dear Anne, if you're pretty as wise,  
I might offer the gifts you prefer,  
But that Barbara tells me with love in her eyes  
I must keep all my kisses for her."

## MARRIAGES.

July 9, at the Episcopal Church in Buffalo, by the Rev. Mr. Shelton, the Hon. Robert McPherson, to Miss Harriet Thompson, both of Black Rock.

In the Parish of Lapele, La., on the 2d of June, Capt. Richard Deraf, of the U. S. Corps of Engineers, to Miss Harriet Covington.

At East Bloomfield, on the 4th inst., by the Rev. Mr. Smith, Lieut. E. B. Birdsall, of the United States Army, to Miss Mary Wilcox, daughter of Doctor Wilcox, of the former place.

In Philadelphia, on the 3d inst., by the Rev. Dr. Bedell, Lieut. N. SAYRE HARRIS, U. S. A. to ELIZABETH CALLENDER, daughter of J. Andrews, Esq.

## DEATHS.

On Sunday forenoon, 14th instant, after a protracted illness, MEINHARD KOLZER, Esq. a native of Hamburg, Germany, and partner of the house of Faerber & Kolzer, of the city of Mexico. At New Orleans, June 26, of the prevailing epidemic, WM. V. CHARDAYONNE, formerly of this city, aged 33 years.

At Petersburg, Va., on the 8th inst., Francis G. Yancey, Esq., senior editor of the Petersburg Intelligencer.

## NORTH-WESTERN RAILROAD.

**NOTICE.** Books for subscriptions to the additional stock of "The Elizabethtown and Somerville Railroad Company," will be opened at William Craig's Inn, in Belvidere, on Monday the 20th day of July instant; at Israel Smith's, in Clinton, on the 30th; at Drake's Hotel, Newark, on the 31st; and at the Exchange, in the City of New-York, on the 1st, 2d, and 3d days of August next, between 11 A. M. and 3 o'clock, P. M. Additional stock required \$500,000, in shares of \$50 each—\$25 on each share to be paid at the time of subscribing.

GARRET D. WALL,  
THOMAS SALTER,  
OLIVER W. OGDEN,  
NATHANIEL SAXTON,  
JOHN W. BRAY,  
JOHN KINNEY, Jun.

Dated July 12, 1833.

BOOKS will also be opened at the same times and places for subscriptions to the stock of "The Susquehanna and Delaware Railroad Company." Capital required, \$1,000,000—Shares \$50 each—\$25 on each share to be paid at the time of subscribing.

HENRY W. DRINKER,  
DANIEL STROUD,  
WILLIAM HENRY,  
JOHN COOLBAUGH,  
A. E. BROWN,  
STOGDEL STOKES,  
DAVID SCOTT,  
JAMES M. TORTER.

Dated July 10, 1833.

BOOKS will likewise be opened at the same times and places, for subscription to the stock of "The Legege's Gap Railroad Company." Capital required, \$500,000—Shares \$50 each—\$25 to be paid at the time of subscribing.

HENRY W. DRINKER, and others,  
Commissioners.

Dated July 10, 1833.

The above roads, the stock of which is now offered to the public in connection with the New Jersey Railroad, form one continuous line of railroad communication from Jersey City, opposite New-York, through the Lackawanna and Region, to the North-east Branch of the Susquehanna, below the great bend, and the North Branch of the Susquehanna at Pittstown, at the mouth of the Lackawanna creek, an head of the Pennsylvania Canal navigation.

The "New-Jersey Railroad" extends from Jersey City, through Newark and Elizabethtown, and New-Brunswick. The "Elizabethtown and Somerville Railroad" extends from Elizabethtown, through Somerville, Clinton, and Mansfield, to Belvidere, on the Delaware. The "Susquehanna and Delaware Railroad" extends from Belvidere through the Delaware Water-Gap, Shroudsburgh, up the Pokono Brook, down Roaring Brook, to its junction with the Lackawanna at Centreville, and down the Lackawanna to Pittstown, on the North Branch of the Susquehanna. The "Legege's Gap Railroad" extends from Centreville, where the Delaware and Susquehanna Railroad enters the Lackawanna Valley, through Legege's Gap across the South Branch of Tunkhannock to the mouth of Martin's Creek, up Martin's Creek to the head waters of Saltick Creek, and down Saltick Creek to the North-East Branch of the Susquehanna, below the great bend.

By this line of Railroad, in addition to the advantage of an open communication at all seasons of the year, the inexhaustible coal deposits of the Lackawanna are between 60 and 100 miles nearer the city of New-York than by any other route of artificial communication now contemplated or believed to be practicable. This is apparent on inspection of the maps of New-Jersey, Pennsylvania, and the large map of New-York: and comparison of this with other lines of communication. jy 20—3.

## TO DIRECTORS OF RAILWAY COMPANIES AND OTHER WORKS.

An Engineer lately from England, where he has been employed in the location and execution of the principal railways in that country, wishes to engage with some company in the United States.

From his practical knowledge of the various kinds of motive power, both of stationary and locomotive engines, also the construction of railway carriages of many descriptions, he has no doubt that he would prove of efficient service to any company having works now in progress.

Letters addressed to W. E. G. 35 Wall street, or to the care of Wm. & F. Jacques, 90 South street, will be punctually attended to. Most satisfactory reference can be given. mif

RAILROAD CAR WHEELS AND BOXES,  
AND OTHER RAILROAD CASTINGS.

Also AXLES furnished and fitted to wheels complete, at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

J. ROGERS, KETCHUM &amp; GROSVENOR.

**G. GRACIE, PRIME & CO.**, offer for sale, at 29

Broad street—

2 cases Gum Arabic	Reduced Duty
20 do. Danish Smalls, EFFF	
10 do. Saxon do. do.	
100 bags Sauzeire	
2 do. Gall Nuts; 20 tons Old Lead	
100 do. Trieste Rags, FF	
6 boxes each 50 lbs. Tartaric Acid	
6 do. each 25 lbs. do. do.	
1 case 50 boules Syrop de Vinaigre	
10 cases White Hermitage; 20 do. Cotic Roche	
10 do. Dry St. Paray; 50 do. Bordeaux Gravé	
20 do. Chateau Grille; 5 cases each 12 boules Olives in Oil	
8 bales Fine Velvet Bottle Corks	
100 do. Bourbon Cloves	
30 do. Molleras Almonds	
143 bundles Liquorice Root	
4 bales Goat Skins	
1 cask Red Copper, 1 do. Yellow do.	

## DRY GOODS BY THE PACKAGE.

10 cases light and dark ground Prints	
40 do. 3-4 and 6-8 colored and black Merinos	
15 do. 5-8 colored and black Circassians	
2 do. Silk Bandannas, black and colored	
4 do. Italian Lustre-ga	
3 do. White Satinens	
4 do. White Quiltings	
10 do. Borrie's Patent Thread, No. 22 and 25	
10 do. Super high col'd Madras Hdkts, ent. to del. nature	
100 pieces Fine English Sheetings, for city trade	
3 cases Canton Corda	
2 do. Super blue, black, and colored Cloths—selected expressly for Merchant Tailors	
25 bales low priced plain Blankets.	

## PAPER—

IMPERIAL AND ROYAL—From the celebrated Sangerties Mills, of the following sizes, all put up with 480 perfect sheets in each ream—

Sizes—21x35, 24x36, 24x34, 26x36, 26x37, 29x41, 27x38, 21x38, 24x25, 24x23, 21x21, 20x21, 20x24, &c. &c.

Also—All the old stock of Medium will be sold at very reduced price, to close sales, the Mill having discontinued making that description of paper.

## ALSO,

Chinese Colored Paper—for Labels, Perfumery, &c.	
5 cases each 1600 Sheets Colored Paper	
2 do. do do do do superfine	
2 do. do do fig. do do	
3 do. do do plain Gold do	
2 do. do do plain Silver do	
2 do. do do Silver do with red figures	
2 do. do do Gold do do	
2 do. do do Red do Gold do	
2 do. do do White do Silver do	A20

## ENGINEERING AND SURVEYING INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship, to any imported or manufactured in the United States; several of which are entirely new; among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1839.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I heartily furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Gravitation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repair, except from accidents to which all instruments of the kind are liable.

I have found that thy pattern for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Superintendent of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying of Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germantown and Norrist. Railroad

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## NOVELTY WORKS.

Near Dry Dock, New-York.

THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited.

TOWNSEND & DURFEE, of Palmyra, Manufacturers of Railroad Rope, having removed their establishment to Hudson, under the name of Durfee & May, offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jarvis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer, Hudson and Delaware Canal and Railroad Company, Carbonado, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,

January 29, 1833.

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## SURVEYORS' INSTRUMENTS.

Compasses of various sizes and of superior quality, warranted.

Levelling Instruments, large and small sizes, with high magnifying power with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 134 Water street, corner of Maiden Lane.

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## INSTRUMENTS.

## SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificate from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accident, to which all Instruments are liable. They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,

Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte.—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprise so well merits, I remain, yours, &c.

B. H. LATROBE,

Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them upon application, to any persons desirous of perusing the same.

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